THE ECONOMIC FACTORS IN KUSHĀṆA HISTORY

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PREFACE

This book embodies a part of the result of my research in one of the fields of Kushāṇa history.

In spelling of proper names I have tried to follow, with a few necessary exceptions, conventional forms. For example, the name of the son of the Kushāṇa king Kujula is written as V'ima[1] Kadphises, andnot as V'ima Kadaphisa. No diacritical mark has been used in modern proper names, including geographical. The term *India* denotes, unless otherwise indicated, the Indian subcontinent comprising the territories of Indian Republic and Pakistan.

I have received in course of my relevant research valuable advices and suggestions from Dr. R. G. Basak and Prof. S. K. Saraswati. I have also discussed certain connected problems with Dr. K. K. Dasgupta.

The manuscript has been carefully typed and made ready for press by Mr. S. K. Mukherjee. Sri C. sen of the P. B. Press has seen the book through the press. Dr. B. Chatterjee has kindly prepared the index.

I am grateful to the above mentioned scholars and friends. I tender apology to my readers for the few printing mistakes which have crept in.

February, 1970
Calcutta

B. N. Mukherjee

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CHAPTER I

INTRODUCTON

Political history of early India is generally studied with reference to the chronology of conquests of kings and rulers. This is no doubt caused by the contents of the available sources which eulogise their political activities without identifying the forces influencing their movements. Nevertheless, it is perhaps not very difficult to guess that the growth of a political power was primarily the result of its ambition for territorial expansion. Sometimes circumstantial testimonies allow us to discern other underlying reasons. Among such other motivating factors we may include the prospect of economic gain, as the love for gain is an inborn instinct of man. A financially affluent or a commercially prosperous region would naturally allure outside invaders more than an arid zone or an economically backward territory. At least the courses of many incidents of the past can be explained logically when judged from this angle of view.

Investigations into the possibility of the existence of economic factors behind political activities will be all the more interesting in studying the history of a period which witnessed India's prosperous commercial relations with the outside world. In the flourishing age of Indo-Roman commerce[1] the most important political power in the Indian subcontinent was the Kushāṇa empire.[2] Hence to understand the trend

in the expansion of the Kushāṇas in India one should try to determine the importance of economic factors in the growth of their power in the subcontinent. An attempt in this direction will be made in the following pages in course of studying the history of the advent of the Kushāṇas in two particular areas of the Indian subcontinent—the lower Indus country and Ākara (Eastern Malwa).

NOTES

1. For an account of the Indo-Roman commerce, see E. H. Warmington, *The Commerce Between the Roman Empire and India*, pp. 1 f ; see also C. G. F. Simkin, *The Traditional Trade of Asia*, pp. 38 f.
2. B. N. Mukherjee, *The Kushāṇa Genealogy* (*Studies in Kushāṇa Genealogy and Chronology*, vol. I), pp. 44 f ; R. Ghirshman, *Bégram, Recherches archéologiques et historiques sur les Kouchans, Mémoires de la Délégation Archéologique Francaise en Afghanistan*, vol. XII, pp. 118 f ; etc.

CHAPTER II

THE KUSHĀṆAS AND THE LOWER INDUS COUNTRY

According to the *Hou Han-shu*, Shen-tu, also called T'ien-chu, was situated on the bank of a large river and was stretched up to Kao-fu (or Kabul) on the western side, to the Western Sea (i. e., the Arabian Sea) on the south-western side and to P'an-chi on the eastern side.[1] This territory was conquered by Yen-kao-chen,[2] i. e., V'ima Kadphises, the Kushāṇa emperor and the son of Kujula Kadphises.[3]

The term *Shen-tu* can be philologically related to the word *Sindhu*,[4] which was also the name of a country to the west of the lower Indus.[5]

In appears from the *Hou Han-shu's* description of Shen-tu[6] that it also lay on the lower Indus and might have embraced some regions on the western side (and perhaps also an area on the eastern side) of that river.[7] The same territory might have been included in the region called Scythia,[8] mentioned in tbe *Periplous Tes Erythras Thalasses*[9] (better known as *Periplus Maris Erythraei*—a work of the 1st century A. D.).[10] It refers to the internecine struggle among the Parthian princes of Scythia."[11] It is generally assumed that these Parthian princes were successors of Gondophares I[12] and that they were ruling in the lower Indus country before the invasion of the Kushāṇas.[13] In fact, V'ima Kadphises might have annexed Shen-tu from these Parthians.[14]

The significance of Yen-kao-chen's, i. e., V'ima's, conquest of T'ien-chu or Shen-tu is also indicated by the *Hou Han-shu*. It states that "since then (i.e., *the conquest of Shen-tu*) the Yüeh-chih have been extremely rich and strong. In the various countries (*their ruler*) is always referred to as the king of Kuei-shuang ; but the Han, basing themselves on the old appellation, speak about the Great Yüeh-chih" (*Italics ours*).[15]

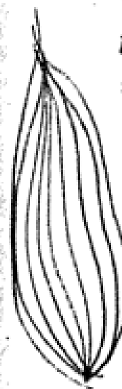
It is clear from this statement that the annexation of Shen-tu to the empire of V'ima Kadphises was of capital importance for the growth of the Kushāṇa power.

This achievement probably ended the Parthian or the Indo-Parthian rule in the western and perhaps also in parts of the eastern divisions of the lower Indus country. It appears that the motive for this conquest lay in the logic of the Kushāṇa expansion in the Indo-Parthian dominions in India. That motive, however, does not appear to have been merely political. For the Parthian or Indo-Parthian rulers of Scythia, quarrelling as they were among themselves probably almost on the eve of the invasion in question, could not possibly threaten the territorial integrity of the Kushāṇa empire. Nor could the area in question be of any great strategic value to a northern power like the Kushāṇas. Hence, if the conquest of the region resulted in the phenomenal growth of their power—as stated explicitly in the Chinese source—then the real inspiration for that achievement should have been something else.

The statement of the *Hou Han-shu* that the Yüeh-chih (the Kushāṇas) became extremely rich as a result of their

conquest of T'ien-chu or Shen-tu, should imply that economic factors played a vital role in motivating them to invade that territory.

The *Periplus* alludes to brisk commercial activities in Scythia.[16] Again, in connection with the description of T'ien-chu or Shen-tu, apparently of the time of the Yüeh-chih occupation, the *Hou Han-shu* indicates the existence of regular commercial relations between this region and Ta-ch'in,[17] i. e., the Oriental possessions of the Roman empire.[18] No doubt, the final stage of the development of the sea-route from the west to India, leading the sailors straight to Mujiris (near the mouth of the Periyar river),[19] must have been reached by A.D. 77, when the *Naturalis Historia* of Pliny, referring to it,[20] was dedicated.[21] Nevertheless, the testimonies of the *Periplus* and the *Hou Han-shu*, mentioned here, clearly suggest that the discovery of the new routes did not minimise overnight the importance of the ports of the lower Indus country. In fact, the *Periplus* indicates that at least for some time three sea routes—including the one leading to Scythia and the other reaching Damirica (in South India)—were frequented *pari passu.*[22] Again, the ports of the lower Indus country were among the first important Indian trading stations for sailors from the Persian Gulf.[23]



To the merchants of North-Western India these ports provided the quickest opportunity for the transhipment of their commodities. These trading stations were connected not only with different parts of India, but also with those of Central Asia. Hence the controllers of these

places could gather immense wealth by levying taxes on commerce.

To the Kushāṇas the importance of the localities in question should have been crystal clear. The *Ch'ien Han-shu's* chapter on the western regions, which does not appear to include any information of the time of Yen-kao-chen, i. e., V'ima Kadphises, [24] refers to two roads running from China to the "western countries". The southern one ran through, *inter alia*, So-chü (Yarkand), the Ts'ung-ling mountains (the Pamir region), (the land of) the Ta Yüeh-chih and An-hsi (Parthia). On the northern route lay Su-lo (Kashgarh), the Ts'ung-ling mountains, (the land of) the Ta Yüeh-chih, Ta-yüan, K'ang-chü and Yen-ts'ai.[25] Articles of Sino-Roman silk trade, which began to be brought to Rome in quantities probably from the time of the emperor Augustus (27 B. C. - A. D. 14)[26] and so from a period prior to any conceivable date for the rule of V'ima,[27] must have passed, at least in earlier phases, through either or both of these routes. It is noteworthy that the *Hou Han-shu* refers to the people of Kao-fu (i. e., Kabul), who were conquered by the father of Yen-kao-chen or V'ima Kadphises, as excelling in commerce and as wealthy.[28] So the Yüeh-chih must have been aware of this trade—and might have participated in it as intermediaries—even before the reign of V'ima. Such an inference is also supported by certain copper coins of Kujula Kadphises, which carry on the obverse an imitation of a head on the coins of the Roman emperor Augustus or Tiberius, and which were probably struck on

the weight standard of early imperial silver denarii of Rome.[28a]

With the increasing, from the time of Augustus,[29] of the tendencies to avoid the routes through the dominions of the inimical and exacting Parthians [30] and also to use the less arduous and more economic sea route between the Roman empire and India,[31] much of this trade was diverted from Central Asia to the Indian ports.[32] In fact, the *Periplus* refers to raw silk, silk cloth and silk yarn (*serikon*) being brought from Thina (i. e., China) and through Bactria (in the Kushāṇa dominions) to Barygaza and also along the Ganges (and by sea) to Damirica.[33] The silk yarn must have been taken also to the lower Indus country. For the same work mentions silk yarn (*serikon*) and also seric skin (*serikon dermata*) as being exported from Scythia.[34]

V'ima might have been allured by the prospects of gain from the annexation of Shen-tu. For such a conquest would empower him to control completely at least one of the routes of the vital silk trade, lying beyond the area of the Chinese influence and up to the sea.[35]

Such a complete mastery would also increase the flow of international trade. For in the changed conditions the merchants would face a minimum number of tariff-posts while covering a great part of the Sino-Roman trade route. Moreover, articles of trade would move through a secure road protected by a strong central authority.

These reasons might induce the merchants to pay the

maximum possible texes, resulting in the accumulation of great wealth for the Kushāṇas.

The conquest of the lower Inuds country would also enable the Kushāṇas to regulate and thereby to make profit from other commercial transactions carried on through that region between Central Asia and North-Western India on one hand and the Roman empire and other western countries on the other.

These observations explain naturally the *Hou Han-shu's* reference to the Kushāṇas becoming extremely rich and powerful as a result of their conquest of T'ien-chu or Shen-tu. Economic considerations seem to have played a vital role in inducing V'ima to invade that territory. It appears that the annexation of the latter served as the key-stone for the economic strncture of the Kushāṇa empire.

Thus the advent of the Kushāṇas in Shen-tu or the lower Indus country, which must have heen an important political event, appears to have been motivated largely by the prospects of gain offered by its thriving Indo-Roman commerce. The dependence of the Kushāṇa prosperity on the foreign trade is further indicated by the simultaneous beginning of the decline of the empire in the reign of Vāsudeva I[36] and that of the foreign influence on the Kushāṇa coinage.[37]

Ptolemy denoted by the term *emporion* an Oriental market town, lying on or near the sea-coast and beyond Roman empire, in the commerce of which entrepot Roman sailors were interested[38] (Appendix I). Hence it is remarkable that he did not place any such market town in his Indo-Scythia,[39] which

included the lower Indus region. This suggests cessation of or at least serious decline in trade relations between the lower Indus zone and the Roman Orient by the date of Ptolemy's *Geographike Huphegesis.* With a regular and skilful use of the trade winds the Roman sailors could, by that time, reach easily and regularly the ports of Southern India, where they could procure and sell all kinds of merchandise, including those available in the lower Indus region. Therefore they did not probably feel the necessity of visiting the lower Indus area. This probably caused a serious damage to the economic condition of that territory by about the date of Ptolemy's *Geographike Huphegesis,* i. e., about the middle of 2nd century A. D.[40]

We do not know whether the embassies sent by the Bactrians, i.e., the Kushāṇas,[41] to the Roman emperors Hadrian (A. D. 117-138)[42] and Antoninus (A. D. 138-161)[43] were in the nature of attempts to revive, though apparently without any success, the Roman trade with the Indus zone. The gradual fall in this trade as well as the fact that by c. 150 A.D. the family of Rudradāman I usurped the authority over the lower Indus region[44] led to the decline of the Kushano-Roman commerce. Almost simultaneous beginning of the decline of the Kushāṇa empire probably suggests that a vital alteration in its economic structure forced the pace of change in its political arena.

NOTES

1. *HHS*, ch. 118, pp. 9-10.
2. *Ibid.*
3. *T'oung Pao*, 1907, s. II, vol. VIII, p. 192.
4. B. Karlgren, *Analytic Dictionary of Chinese and Sino-Japanese*, nos. 869 and 645 ; *Our Heritage*, 1967, vol. XV, pp. 1-12 ; *Monthly Bulletin of the Asiatic Society*, 1966, vol. I, no. 2, p. 5 ; S. Konow, *Corpus Inscriptionum Indicarum*, vol. II, pt. I, p. LXVII.
5. See above n. 4.
6. *HHS*, ch. 118, pp. 9-10.
7. *Our Heritage*, 1967, vol. XV, pp. 1-12 ; S. Konow, *op. cit.*, vol. II, pt. I, pp. XXVI, LXVI and LXVII.
8. See above n. 7.
9. *Periplus*, sec. 38.
10. W. H. Schoff, *The Periplus of the Erythraean Sea*, pp. 7 f ; B. N Mukherjee, *Kanishka I and the Deccan* (*Kushāṇas and the Deccan*, pt. I), pp. 123-127. For theories advocating a 3rd century A.D. date for the *Periplus*, see J. Pirenne, *Le Royaume Sud-Arabe de Qataban et sa Datation*, pp. 64-65 ; J. Pirenne, *Journal Asiatique*, 1961, vol. CCXLIX, pp. 441 f ; H. De Contenson, *ibid*, 1960, vol. CCXLVIII, pp. 75 f ; R. C. Majumdar, "The Date of the Periplus of the Erythraean Sea", *IHQ*, 1962, vol. XXXVIII, pp. 89-97 ; etc.
11. *Periplus*, sec. 38.
12. S. Konow, *op. cit.*, vol. II, pt. I, pp. XXVI, LXVI and LXVII ; see also our article in *JAS*, 1967, vol. IX, pp. 1-7.
13. See above n. 12.
14. See above n. 12.
15. *HHS*, ch. 118, p. 9.
16. *Periplus*, sec. 39.

17. *HHS*, ch. 118, p. 9. In the *Hou Han-shu's* description of T'ien-chu, the trade between that territory and Ta-ch'in is referred to after indicating the Yüeh-chih as the reigning masters of T'ien-chu. Hence the trade in question was in existence after the Kushāṇa invasion of T'ien-chu and during their rule in that country.
18. *T'oung Pao*, 1915, s. II, vol. XVI, p. 690.
19. V. Kanakasabhai, *The Tamils Eighteen Hundred Years Ago* (2nd edition), p. 18.
20. Pliny, *Naturalis Historia*, VI, XXVI, 100-101 and 104; E. H. Warmington, *The Commerce Between the Roman Empire and India*, pp. 45-46.
21. Pliny, *op. cit.*, Preface, sec. 3. It is believed that revisions were made till the time of Pliny's death in A.D. 79 (M. Cary, *et. al.*, *Oxford Classical Dictionary*, p. 704).
22. *Periplus*, sec. 57.
23. See also E. H. Warmington, *op. cit.*, p. 291.
24. The *Hou Han-shu*, which records the events of the period subsequent to that dealt with by the *Ch'ien Han-shu*, refers to V'ima Kadphises.
25. *CHS*, ch. 96A ; *Journal of the Anthropological Institute*, 1881, vol. X, pp. 21 and 48.
26. E. H. Warmington, *op. cit.*, p. 175. References to the "true" silk used for clothing, pillows, cushions and so on began to appear in Roman literature from the time of Augustus (*ibid.*). For references to the original sources, see *ibid.*, p. 366, f.n. 63.
27. No current theory assigns V'ima to an age earlier than the second quarter of the 1st century A.D.
28. *HHS*, ch. 118, p. 9.

28a. R. B. Whitehead, *Catalogue of Coins in the Punjab Museum, Lahore*, vol. I - *Indo-Greek Coins*, p. 181, nos. 24 f ; *Journal of the Numismatic Society of India*, 1968, vol. XXX, pp. 39 and 46.

29. E. H. Warmington, *op. cit.*, pp. 34 f.

30. *HHS*, ch. 118; *T'oung Pao*, 1907, s. II, vol. VIII, p. 185; M. P. Charlesworth, *et al.* (editors), *Cambridge Ancient History*, vol. XI, pp. 97-98 and 121 f; N. C. Debevoise, *A Political History of Parthia*, pp. 143 f.

31. E. H. Warmington, *op. cit.*, pp. 30, 34 and 50 f.

32. For an account of this trade, see *ibid.*, pp. 1 f.

33. *Periplus*, sec. 64.

34. *Ibid.*, sec. 39. Even some of the products of the Parthian empire itself could have been exported to the Roman empire through Scythia (*ibid.*, sec. 39; W. H. Schoff, *op. cit.*, p. 117). There is no reason to agree with the view of J. Kennedy that the amount of the sea-borne silk, referred to in the *Periplus*, was small (*JRAS*, 1912, pp. 986-987).

35. Even prior to his conquest of T'ien-chu or Shen-tu, V'ima probably had under him Ta-hsia and the regions immediately above it, Bactria, Kao-fu and Chi-pin.

Ta-hsia and the regions immediately above it, to the north of the Oxus, were under the Yüeh-chih even before the rise of the Kushāṇa empire. The area covered by Koussanenon ethnos, as described in the Naqsh-i-Rustam inscription of Shāpūr I, includes these territories. So they were under the Kushāṇa empire until the time of its downfall (*Indian Studies Past and Present*, 1964-65, vol. V, p. 272). Hence they were probably within V'ima's empire. The region of Bactra in Western Bactria (P'u-ta), Kabul (Kao fu) and Chi-pin (in North-Western India) were conquered by Kujula. V'ima must have inherited them.

Within the limits of these territories and of Shen-tu there was a silk-route, running outside the regions under the Chinese influence and up to the ocean.

36. K. A. Nilakanta Sastri (editor), *A Comprehensive History of India*, vol. II, p. 247.

Sharp decrease in the mean quantity of pure gold (*JNSI*, 1958, vol. XX, p. 170) as well as the remarkable disproportion between the waning of the average weight and of the gold content in the Kushāṇa coinage of the days of Vāsudeva I (*ibid.*) may indicate that evil days befell the empire by some time during his reign.

37. *PMC*, vol. I, pl. XVIII, nos. 1 f ; K. A. Nilakanta Sastri, *op. cit.*, p. 790 ; see also *The Quarterly Review of Historical Studies*, 1965-66, vol. V, p. 183. It may be noted here that the Kushāṇas initiated their gold currency under the influence, among others, of the weight standard of the Roman gold coins which had found their way to India through trade. In this connection see also B. N. Mukherjee, "The International Value of Kushāṇa Gold Coins in Relation to Imperial Roman Currency," *Congresso Internazionale di Numismatica*, 1961, Roma, vol. II, pp. 475-478.
38. See also E. H. Warmington, *op. cit.*, p. 107 ; M. Wheeler, *Rome Beyond the Imperial Frontiers*, pp. 151-152 ; *Classical Quarterly*, vol. XLV, p. 157.
39. Ptolemy, *Geographike Huphegesis*, VII, I, 55-61 ; B. N. Mukherjee, *An Agrippan Source—A Study in Indo-Parthian History*, pp. 45-46 and 56.
40. G. Vissowa (editor), *Paulys Realencyclopadie der Classischen Altertum-swissenschaft*, vol. XXIII, no. 2, col. 1789-1790 ; B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 128-130.
41. *Indian Studies Past and Present*, 1964-65, vol. V, pp. 271-272.
42. *Scriptores Historiae Augustae*, Hadrian, XXI, 1, 4.
43. Aurelius Victor, *Epitome*, XV, 4. Here the form *Bactri* is probably a mistake for *Bactrii* or *Bactriani*.
44. *E I*, vol. VIII, p. 44 ; R. C. Majumdar (editor), *Age of Imperial Unity*, pp. 114-185 ; etc.

CHAPTER III

KANISHKA I AND ĀKARA

A

The *Ṛgya-gar-chos-ḥbyuṅ* of Tāranātha contains an apparently interesting information on the Kushāṇas. A passage in this text states that "in the west in the land of Ṭili and Mālava a king Kanika, young in years, was chosen as sovereign. Twenty-eight diamond mines having heen recently discovered, he lived in great wealth. He built four great temples according to the four regions of the world, and continually entertained 30000 *bhikshus* of the Great and Little Vehicles."[1]

The *Ḍpag Ḅsam Ḷjon Ḅzang* of Sumpa Khan-po describes Kanika as a king of Palawa (or Palhava ?)[2] and Dili.[3] The expression *Palawa* may have been a scribal error for *Mālawa* (= *Mālava*).[4] In fact, in the Tibetan script, used by Tāranath and Sumpa, the forms of the letters *pa* and *ma* have some resemblance to each other.[5]

Both Tāranātha[6] and Sumpa[7] distinguish Kanika from Kanishka, identifiable with Kanishka I. We have pointed out elsewhere the fallacy of making such a distinction.[8] In fact, the suggested identity of these rulers is in a way supported by Sumpa himself. He describes Kanika as a contemporary of

Aśvaghosha,[9] whom certain Chinese versions (the *Tsa-pao-tsang ching*, the *Fu fa-tsang yin yüan chuan*, etc.)[10] of Indian originals associate with Chi-ni-cha, i.e., Kanishka I.[11] We may also point out that though Al-Bīrūnī referred to Kanik as the founder of the vihāra at Purushavar,[12] the Shāh-ji-kī-Ḍherī inscription had in an earlier period alluded to the creation of this establishment in the reign of Kanishka I.[13]

Both the terms *Kaṇika* and *Kanishka* may have been derived from the base *Kan*.(>*Kana*) meaning "youthful", "young", "small", etc.[14] -*Ishka* and -*ika* (=-*īka*) appear ro be suffixes.[15] The forms *Kanika* is thus philologically as well as historically related to the word *Kanishka*.[16]

Tāranātha claimed that Kanika reigned in Mālava, where diamond mines had been discovered "recently." Diamond mines were worked in or near Malwa of the Mughal period,[17] in which age Tāranātha flourished.[18] No such deposit is known to have been existed in other areas known as Mālava in early and mediaeval ages.[19] Hence we should presume that he replaced an earlier topographical name by a contemporary one.[20]

A part of this land has been called Ākara in certain early epigraphic and literary sources.[21] The name *Ākara*, which literally means "mine",[22] is known to have been mentioned for the first times in the Nasik inscription of the mother of Gautamīputra Sātakarṇi (which describes him as the lord of Ākara)[23] and the Junagadh record of about the year 72 of Rudradaman I (which includes Ākara within his dominions).[23a] We have shown elsewhere that the majority, if not at all, of the

known twenty-four regnal years of Gautamīputra Sātakarṇi should be placed in the fourth decade of the 1st century A.D., and that it was not impossible for him to continue to rule up to sometime of the first decade of the 2nd century A.D.[24] The year 72 of the Junagadh record, which is generally attributed to the Śaka Era, corresponded to c. A.D. 149-50.[25] It appears that the area concerned became femous for its mines by the late 1st or the early 2nd century A.D. So if Kanika was the same as Kanishka I, a king probably of the 4th quarter of the 1st century A.D.,[26] the mines in question could have been described in a statement pertaining to him as having been discovered "recently".

Ākara has been placed in Eastern Malwa.[27] It apparently included the region of Sanchi. The inscription of Vaskushāṇa (=Vāsishka Kushāṇa ?) of the year 22 (of the Kanishka Era), found at Sanchi, indicates that the Kushāṇa hegemony was established in that area in or by the time of Kanishka I,[28] who reigned at least up to sometime of the year 23 (of that reckoning).[29] So the latter king might have been the first Kushāṇa sovereign whose rule was accepted by the people of the territory in question. This incident could have been hyperbolically described as a case of election. Similar examples of exaggerated statements can be cited from epigraphic sources.[30]

Thus Tarānātha's observation regarding the election of Kanika does not negative the suggestion of his identification with Kanishka I. In fact, such an identification is indicated by all available data, analysed above.

B

Tāranātha refers to the rule of Kanika (=Kanishka I) in Mālava (incorporating the area of Ākara) and his living "in great wealth" as a result of "recent" discovery of diamond mines in that region.

Kosa, described by Ptolemy as a place "where diamonds are found"[31] was in the country of the Prapiotai living near the Oundion (or the Vindhya) range and along the bank of the Namados (or the Narmadā).[32] It appears from the context of Ptolemy's description that Kosa might have been situated in or not far from Eastern Malwa or Ākara.[33] E. H. Warmington has convincingly shown that Ptolemy's purpose behind referring occasionally to some Indian places as sources of certain commercial products was to indicate that such articles had "recently" gained importance to the traders from whom mainly he collected his data on India.[34] So by the latest possible date for Ptolemy's information on India, i.e., c. A.D. 150, diamond of Central India had become an important article of Indo-Roman commerce.[35]

It is interesting to note that the Junagadh inscription of Rudradāman I of about the year 72 (of the Śaka Era) or c. A.D. 149-50 describes him as the lord of *inter alia* "the whole of eastern and western Ākarāvanti" (Ākara and Avanti) and states that his treasury was overflowed with precious stones including *vajra* or diamond obtained through tribute, tolls and shares (*bali-śulka-bhāga*).[36] Diamonds, deposited in his treasury, probably formed a part of taxes on commercial articles realised in kind. This indicates the commercial use of

diamonds in the dominions of Rudradāman I by the middle of the 2nd century A.D. Ākara, the name of which means "mine" and in or near which diamonds were actually found, could have been the source or one of the sources of the diamonds collected in the treasury of Rudradāman I.

The reference in a Nasik inscription to Ākara as one of the provinces of Gautamīputra Sātakarṇi[37] shows that the region concerned became known by that name before the end of his rule. It is not impossible that the area began to be so called because of the importance of some mines worked there. Parallel examples of changes of the names of places on account of discoveries of new mines can be cited. A place called Birāgam in the *'Ain-i-Akbarī* is perhaps mentioned as Barākar in the *Tūzuk-i-Jahāngīri*, which also refers to the diamond mine of that locality.[38] As the term *Varākara* (*Barākara*) literally means "best-mine", the fame of the diamond mine of Barākar might have been responsible for the change of the name of that area. Modern Barākar in the Burdwan district of West Bengal is famous for its coal-mine. Apparently the region concerned, which is also known as Begunia, came to be known as Barākar (Varākara or "best mine") sometime after the coal-mine had begun to be worked.[39]

As it is well-known, coal-mining industry has changed the economic structure of Bihar and West Bengal. A similar example of the importance of mining can be cited from a much earlier record. The Samoli (Rajasthan) inscription of Śilāditya of 703 V.S. states that a *āgara* (=*ākara*) or mine started by a Mahājana community at Araṇyakūpagiri became a source of

livelihood for people, and that a temple erected there was crowded by rich and wealthy persons.[40]

Similarly, Ākara might have become economically important on account of its workable mines, which were probably well-known in the period of Gautamīputra Sātakarṇi, and so also in the days of Kanishka I, his contemporary or semi-contemporary Kushāṇa monarch.

It was only natural for the Kushāṇas, who were very much interested in trade,[41] to be aware of the importance of Ākara. And as the prospect for economic gain prompted the Kushāṇas to conquer Shen-tu on the lower Indus before the reign of Kanishka I,[42] a similar motive might well have been behind the advent of the Kushāṇas in Ākara.

This elaborate reasoning suggests that if Kanika, referred to by Tāranātha, was the same as Kanishka I, rich diamond mines might have lured the Kushāṇas into Ākara. In a much later period similar allurement led the Mughal emperor Jahāngīr to take possession of the territory of Kokrah and its diamond mines.[43]

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In the light of these data a Chinese legend assumes a special significance. It occurs in the *Yu yang tsa tsu*, composed by Tuan Ch'eng-che in A.D. 860.[44]

The story itself is as follows :[45]

"Formerly there reigned in Gandhāra (Kan-to) a worthy and shrewd king ; his name was Kanishka. He led his armies against all nations ; none resisted him. Once, during his

campaign in India (T'ien-chu) (literally five Indies), some one presented him two very fine fabrics. He kept one (for himself), and bestowed the other on his queen. The queen clothed herself (with it), and came forward before the king. Now on the fabric, just over the breast of the queen, appeared the imprint of a hand in saffron (colour). At the sight of this the king grew angry, and demanded of the queen 'what does the robe, put on by you, signify, and what does the mark of a hand convey ?' The queen said to him 'this is the same cloth which the king has given me.' Furious, the king demanded an explanation from his treasurer, who replied to him 'a piece of this stuff always carries this mark. Your bondsman is not here for nothing.' And the king ordered the merchant, (who) had sold (the cloth to the buyer who had presented it to the king), to appear (before him) ; the latter (i.e., the merchant) said, 'in South India reigns king Sātavāhana (So-t'o-p'o-hen) ; and here (is one) who can fulfil his vow, made previously ; every year he accumulates, one upon the other, fine fabrics brought to him as taxes ; he imprints his hands, wet in saffron, on these stuffs, and this imprint penetrates through all the pieces heaped up in thousands and tens of thousands. In whatever way a man may put on one of these cloths, the mark of a hand will appear on his back ; and (it appears) over the breast if it is (worn by) a female.'

The king ordered the personnel of his retinue to put on (the pieces) themselves, and it (was) as the merchant had said. Striking on his sword, the king cried out, 'I (won't) sleep or (take) rest before I cut off the hands and feet of king

Sātavāhana.' And he despatched a messenger to South India to demand the hands and feet of king (Sātavāhana).

On the arrival of the messenger, king Sātavāhana and his minister spoke to him falsely that 'we have a good king who has the name *Sātavāhana* ; but this is not an actual king ; nevertheless, the power and the supreme authority are in the hands of us, the ministers.'

On (hearing) that, the king (i.e., Kanishka) ordered his cavalry and elephants to go down to the South, against the kingdom of (king) Sātavāhana.

The inhabitants concealed king (Sātavāhana) in an underground cave ; and then cast in gold (a statue of) a man, which went (i.e., was taken) to meet the invader. But the king (i.e., Kanishka) recognised the forgery, and, relying on the strength of his previous merits, he cut off the arms and the legs of the man (i.e., the statue) of gold. At the same moment fell off the two arms and (the two) legs of king Sātavāhana, hidden in the cave."

We have elsewhere examined this legend in detail and have suggested that it may have a substratum of truth.[46] We may at least infer from it, even after it is divested of all fanciful elements, that Kanishka I might have defeated a Sātavāhana king. Whatever might have been the real cause of the trouble, it was not impossible for Kanishka I to defeat a Sātavāhana monarch. Kanishka I probably began in A.D. 78[47] his known period of reign of 23 years. As it has been recorded above, we have shown elsewhere that the majority, if not all, of the known 24 regnal years of Gautamīputra Sātakarṇi should be placed in the 4th quarter of the 1st

century A.D.[48] We have also suggested elsewhere that Vāsishṭhīputra Puḷumāvi, the son and successor of Gautamīputra Sātakarṇi, ascended the throne sometime in the closing years of the 1st century A.D. or in the first decade of the 2nd century A.D.[49] So either the father or the son or both of them might have been Kanishka I's contemporary or contemporaries.[50] We have noted above that Ākara, or at least a part of it, was annexed to the Kushāṇa empire during the reign of Kanishka I. It formed a part of Gautamīputra Sātakarṇi's kingdom. It was also not impossible for his son to inherit this part of his father's dominions. Thus Kanishka I could have clashed in the territory of Ākara with either Gautamīputra Sātakarṇi or his son Vāsishṭhīputra Puḷumāvi.[51]

Thus a theory suggesting that Kanishka I probably annexed Ākara from the Sātavāhanas may not be altogether unconvincing. At least the above study of Indian, Tibetan and Chinese sources alludes to such a possibility. This inference, if found acceptable, demarcates a major landmark in the expansion of the Kushāṇa power in India. Even if one doubts the veracity of our inference from the Chinese legend, narrated above, the other data, furnished in this chapter, surely indicate that the prospects of financial gain allured the Kushāṇas into Ākara.

NOTES

1. Schiefner, *Tāranātha* (text), pp. 70-71 ; Schiefner, *Tāranātha* (translation), pp. 89-90.
2. *Journal of the Buddhist Text Society of India*, vol. I, pt. III, p. 18.
3. S. C. Das (editor), Sumpa Khan-po, *Ḍpag Bsam Ljon Bzang*, p. 91. "At that time there was a king towards the west—Dili and Palawa—called Kanika, who opened 28 mines of precious metals and worshipped more than 30000 monks of the Mahāyāna sect."
4. In this connection see F. Wilhelm, "Kanika and Kaniṣka, Aśvaghoṣa and Mātṛceṭa," *Papers on the Date of Kaniṣka* (edited by A. L. Basham), p. 338.
5. H. B. Hannah, *A Grammar of the Tibetan Language, Literary and Colloquial*, p. 6.
6. Schiefner, *Tāranātha* (text), pp. 70-72 ; Schiefner, *Tāranātha* (translation), pp. 90-92.
7. S. C Das (editor), *op. cit.*, pp. 82-83 and 91.
8. B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 49-50, n. 51. The *Mahārāja-Kanika-lekha* refers king Kanika to the Kuśa race (v. 49). The *Ta chuang-yen lun ching* describes Chia-ni-cha (Kanishka I) as a monarch among the Chü-sha race. These testimonies and also the fact that *Koþ* seems to be the stem of the form *Koþano* appearing on the Kushāṇa coins definitely indicate that Kanika of the *Mahārāja-Kanika-lekha* was a Kushāṇa sovereign.

   Tāranātha refers to Kanika apparently as the first member of his family to rule in Mālava [Schiefner, *Tāranātha* (text), p. 70 ; Schiefner, *Tāranātha* (translation), p. 89]. This Kanika, to whom Mātṛicheṭa addressed his famous letter, was, as noted above, a Kushāṇa. As we

have noted above, a part of Mālava was incorporated in the Kushāṇa empire during the reign of Kanishka I. (*PIHC*, 1944, p. 135 ; *BSOAS*, 1953, vol. XV, p. 977 ; B. N. Mukherjee, *The Kushāṇa Genealogy* (*Studies in Kushāṇa Genealogy and Chronology*, vol. I), pp. 47 and 107—108.

Thus Tāranātha seems to be wrong in distinguishing Kanika from Kanishka. The known facts suggest the identity of Kanika of the *Māharāja-Kanika-lekha* with Kanishka I.

9. S. C. Das, *op. cit.*, p. 91.
10. *Tsa pao-tsang-ching*, ch. VII, pp. 223 f ; (*Taisho Tripiṭaka*, no. 203) ; *Fu fa-tsang yin yüan chuan*, ch. V, pp. 315 f (*Taisho Tripiṭaka*, no. 2058).
11. From the contents of certain legends mentioning the names *Chia-ni-cha* and *Chi-ni-cha* it appears that they refer to one and the same person. In one story Chi-ni-cha is described as a Yüeh-chih king, and in another Chia-ni-cha is assigned to the Chü-sha, i.e. Kusha, race, which, as is known from other sources, formed a branch of the Yüeh-chih people. The Yüeh-chih as well as Kushāṇa Chia-ni-cha/Chi-ni- cha is extolled in these stories for his great zeal for Buddhism. It is also noteworthy that the character *chia* of *Chia-ni-cha* indicates that the name transliterated as *Chia-ni-cha* began with *Ka* (B. Karlgren, *Analytic Dictionary of Chinese and Sino-Japanese*, no. 342). These suggest that Chia-ni-cha=Chi-ni-cha should be identified with the Yüeh-chih as well as Kushāṇa monarch Kanishka I, the famous patron of Buddhism.
12. *Al-Bīrūnī, Taḥqiq-i-Hind* (edited by E. Sachau), ch. 49, p. 207 ; E. Sachau, *Alberuni's India*, vol. II, pp. 10-11.
13. *British Museum Quarterly*, 1964, vol. XXVIII, pp. 41 f.
14. H. W. Baily, "Kaniṣka", *Papers on the Date of Kaniṣka* (edited by A. L. Basham), p. 37 ; R. Turner, *A Comparative Dictionary of Indo-Aryan Languages*, p. 136.

15. See above n. 14 ; see also M. J. Dresden, The Jātakastava or "Praise of the Buddha's Former Births", *Transactions of the American Philosophical Society*, 1955, vol. XLV, pp. 418-419.

16. The expression *Kaṇaiska* appears in a Śaka-Khotanese legend apparently as an alternative form of the name *Kanishka*. In Khotanese this word literally denotes "little finger", "named in various languages as the smallest". This suggests, H. W. Bailey observes, that "*Kaṇaiska*-had a superlative significance". Probably—*iska* (=—*ishka*) is a superlative suffix. *Kanishka* should therefore mean "most youthful" (H. W. Bailey, *loc. cit.* ; *JRAS*, 1942, p. 250 ; for the use of-*iska* as a dimunative suffix, see *Acta Orientalia*, 1928, p. 93).

It is interesting to note that the name *Chia-ni-cha*, occurring in certain Chinese versions of Indian stories and referring to Kanishka I, seems to have been pronounced in Ancient Chinese as *Ka-n'i-'t'a* [E. Zürcher, "The Yüeh-chih and Kaniṣka in the Chinese Sources", *Papers on the Date of Kaniṣka* (edited by A. L. Basham), p. 390]. This suggests the form in the Indian originals as something like *Kaniṭṭha* or *Kanishṭha*, literally meaning "most youthful" (M. Moniar Williams, *op. cit.*, p. 248). The authors of the Indian originals in question seem to have Sanskritised *Kanishka* as *Kanishṭha*.

17. R. Roolvink, *et. al.*, *Historical Atlas of the Muslim Peoples*, pl. 32. Tavernier, who visited India in the Mughal period, did not refer to the diamond mines in or near Panna. But a few other relevant sources seem to allude to these mines. See V. Ball, *Travels in India by Jean Baptiste Tavernier*, vol. II, pp. 453-54. These mines are still worked (W.H. Schoff, *The Periplus of the Erythraean Sea*, p. 224).

18. Schiefner, *Tāranātha*, (translation), p. VI.

19. D. C. Sircar, *Ancient Malwa and the Vikramāditya Tradition*. pp. 1-3. The implication of Tāranātha's reference to one "Mālava in Prayāga" [Schifner, *Tāranātha* (text), p. 190 ; Schiefner, *Tāranātha* (translation), p. 251] need not be considered here, since he did not indicate the existence of any diamond mine in or near that Mālava region. This

Mālava has been identified with Malwa in the Fatehpur district (D. C. Sircar, *op. cit.*, p. 2). The geographical positions of this and certain other areas known as Mālava in early and mediaeval ages do not suit the conditions for identification with Mālava having diamond mines so well as does Eastern Malwa or Ākara.

20. For a description of the subah of Malwa in the Mughal empire of the time of Ākbar, see Abūl Fazl-i-Āllamī, *'Āin-i-Ākbarī*, III, 15 ; H. S. Jarrett and J. N. Sarkar, *'Ain-i-Ākbari of Abul Fazl-i-Āllami*, vol. II, p. 162.
21. *EI*, vol. VIII, pp. 44 and 60 ; Varāha-mihira. *Bṛihat-saṁhitā*, XIV, 12.
22. M. Monier-Williams, *op. cit.*, p. 127.
23. *EI*, vol. VIII, p. 60.

23a. *Ibid.*, p. 60.

24. B. N. Mukherjee, *op. cit.*, p. 104 ; *EI*, vol. VIII, pp. 40, 42 and 44.
25. B. N. Mukherjee, *op. cit.*, p. 106.
26. *Ibid.*, pp. 105-107.
27. *IA*, 1878, vol. VII, p. 259 ; *BG*, vol. I, pt. I, p. 36 ; vol. XVI, P. 631 ; *CCADWK*, p. XXXIII.
28. H. Hamid, R. C. Kak and R. P. Chanda, *Catalogue of the Museum of Archaeology at Sanchi, Bhopal State*, pp. 29 30, no. A. 82 ; *PIHC*, 1944, p. 135 ; *Indian Culture*, vol. VIII, p. 192 ; B. N. Mukherjee, *op. cit.*, pp. 77-78 and 92-95, nn. 71a, 72, 73 and 74 ; B.N. Mukherjee, *The Kushāṇa Genealogy* (*Studies in Kushāṇa Genealogy and Chronology*, vol. I), pp. 107-108, nn. 192-193 and p. 117, n. 326. We may recognise in the name *Vaskushāṇa* a reference to Vāsishka Kushāṇa (*Vāsishka Kushāṇa* = *Vāsashka* (as the name appears in the Sanchi record of the year 28) *Kushāṇa* > *Vāsaska* (+) *Kushāṇa* > *Vāsk(a)* (+) *Kushāṇa* > *Vāsk* (+) *ushāṇa* > *Vāskushāṇa* > *Vaskushāṇa*). The Kushāṇa rule in the Sanchi area is also suggested by the record of Vāsashka (Vāsishka) of the year 28, discovered in

that locality (J. Marshall, A. Foucher and N. G. Majumdar, *The Monuments of Sāñchi*, vol. I, p. 278).

29. See above n. 26.

30. For a similar example we can refer to the claim in the Junagadh inscription of Rudradāman I that he "was resorted to by all castes and chosen their lord to protect them" (*EI*, vol. VIII, pp. 43 and 47). We can also refer to the statement in the Khalimpar copper plate of Dharmapāla that Gopāla (I) was elected by the people to end the condition of *mātsyanyāya* in the country (*ibid.*, vol. IV, p. 248).

31. Ptolemy, *Geographike Huphegesis*, VII, 1, 65.

32. *Ibid*,

33, See McCrindle, *Ptolemy*, pp. 158-159. We may add here that Panna, one of the famous sources of Indian diamonds, is situated in or near Eastern Malwa (V. Ball, *op. cit.*, pp. 453-54 : *Imperial Gezetteer of India*, 1931, vol. XXVI, pl. 40 ; D. N. Wadia, *Geology of India*, pp. 486 f).

34. E. H. Warmington, *Commerce Between the Roman Empire and India*, p. 110.

35. *Ibid.*, p. 236. The *Periplus* refers to the export of diamonds from Dimurike or the Draviḍa country (sec. 56). According to Manilius, diamond was more precious than gold. For the use of diamond, see also Pliny, *Naturalis Historia*, XXXVII, 56-61.

35. *EI*, vol. VIII, p. 44.

37. *Ibid.*, p. 59.

38. A. Rodgers, and H. Beveridge, *Tūzuk-i-Jahāngīri*, vol. II (1968), p. 21 and f. n.

39. A 16th century epigraph inscribed on a local temple refers to a person as hailing from Śivapada (*JASB*, 1936, p. 25). It is not certain whether Śivapada was the name of the Barakar area itself (see also *ibid.* p. 23). According to J.C.K. Peterson (*Bengal District Gazetteer*, Burdwan, p. 185), the name *Barākar* "is ordinarily understood to include the villages of Beguniā, Ladna and Manberiā and several small collieries." We may

infer from this observation that the name *Barākar* (*Varākara* or "Best Mine") was applied to certain localities which were already known by other names and where some mines (*ākaras*) were situated.

40. *EI*, vol. XX, p. 99.
41. *The Quarterly Review of Historical Studies*, 1965-66, vol. V, pp. 181 f.
42. *Ibid.*
43. *Wāki'āt-i Jahāngīrī*; H. M. Elliot and J. Dowson, *The History of India as Told by its Own Historians*, vol. VI (Indian edition, 1964), pp. 344-346. For an account of the working of diamond mines in the Mughal period, see W. H. Moreland, *India at the Death of Akbar—An Economic Study* (reprint, 1962), pp. 141-143.
44. *Bulletin de l'École Francaise d'Extrême-Orient*, 1906, p. 33.
45. *Ibid*; ch. VII, p. 7 of the reprint of the *Yu yang tsa tsu* in the *Ts'in tai pi shu.*
46. B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 66 f.
47. *Ibid.*, pp. 106-107.
48. *Ibid.*, p. 104.
49. *Ibid.*, pp 102-104.
50. *Ibid.*, pp. 77-79.
51. *Ibid.*

CHAPTER IV

EPILOGUE

The data, analysed in the preceeding chapters, demonstrate the interest of the Imperial Kushāṇas in trade and commerce. Prospects of economic gain prompted their entry into the lower Indus area and Ākara.

To the Yüeh-chih and/or the Kushāṇas the economic importance of Rome's trade with the Orient could have been apparent from an early period of their history.[1] As we have noted above, a part of the silk route, through which important articles of this trade were used to transported,[2] lay in the dominions of the Yüeh-chih. They might have even participated in these commercial transactions as intermediaries (see above p. 14).

There are also other data indicating trading activities of the Yüeh-chih people. We can refer to an information of K'ang-T'ai, apparently collected during his mission to Fu-nan in c. A. D. 245-250[3] and now preserved in the ***T'ai-p'ing Yu-lan***. It states that "the Yüeh-chih merchants are continually importing them (*horses*) to the Ko-ying country by sea (or ship). The king buys them all. If one (*of the horses*) is dead during the voyage and has to be helped by its mane when it is shown to the king, the latter buys it at half-price[4] (*Italics mine*). Ko-ying has been located by P. Pelliot in the littoral Malay peninsula,[5] and by O. W. Wolters in the east

coast of Sumatra.[6] The memory of the activities of the Yüeh-chih horse dealers in South-East Asia is probably perpetuated in the representation of two personages clad in the Yüeh-chih dress (?) along with a horse in an engraving on a drum[7] found in the island of Sangeang off the coast of Sumbawa, Lesser Sunda Islands,[8] and dated to the 2nd or the 3rd century A. D.[9] The statement of K'ang-T'ai, the envoy of the Wu kingdom to Fu-nan, indicates that during his period horses were in great demand in Ko-ying. It is not impossible that many of these horses were meant for export to the Wu kingdom, which occupied almost all of China to the south of the Yangtse. As Wu, which was one of the three kingdoms emerging from the ruins of the Later Han empire, was left out of trade with central Asia probably due to rivalry with the other two kingdoms, it had to look to South-East Asia for the regular suppy of horses, which it prized very much.[10] The Yüeh-chih, the abundance of horses in whose country had been referred to in an earlier period by the *Shih-chi*,[11] developed the source of supply of horses to South East-Asia through a maritime route starting from somewhere in the Indian subcontinent. This development in international trade by about the fifth decade of the 3rd century A. D. betray the genuine interest of the Yüeh-chih (Kushāṇas) or the merchants of their empire even during the age of its decline. In fact, the continuation of their trading activities even after the downfall of the empire is indicated by the *Pei-shih*. It appears from this treatise that the Yüeh-chih merchants were doing business in the northern

capital of China during the reign of the Wei emperor Wu Ti (A. D. 424-452).[12]

Thus it was only natural for the Yüeh-chih (Kushāṇas) to become interested in the trade transacted through Shen-tu. As we have suggested above, its importance in the field of Indo-Roman commerce was probably considerable on the eve of the advent of the Kushāṇas (p. 19). In fact, the lower Indus country had become one of the important centres of Indo-Roman trade since its inception (Appendix III).

The eagerness to participate in India's foreign trade was however, not peculiar to the Imperial Kushāṇas. Several, sources indicate that some other dynasties, ruling slightly earlier than or contemporaneously with the Kushāṇas, attached great importance to Indo-Roman trade. The commercial character of the Indian embassies sent to Augustus is now well-recognised.[13] Strabo speaks of a letter from an Indian king to Augustus expressing the desire to grant him "the right of access" wherever he wished to go and to assist him in any good enterprise.[14] This perhaps suggests the Indian monarch's eagerness to allow the Romans to move freely on lawful business and to promote Indo-Roman transactions.

The results of such diplomatic activities can be traced in the expression *emporion enthesmon* or "lawful market town" applied to Kalliena (i. e., Kalyan near Bombay)[15] in the *Periplus*.[16] It appears from this text that Kalliena attained this status in the days of Elder Saraganes, but later it became blockaded by another power.[17] The latter diverted to Barygaza

(Bhṛigukachchha or Broach)[18] all Greek vessels bound for Kalliena (Kalyāṇa or Kalyan).[19] Saraganes may be identified with one of the Satavāhana rulers called Sātakarṇi[20] ; and the instance recorded in the *Periplus* may perhaps be attributed to a phase of the Kshatrapa-Sātavāhana struggle.[21] The enemies of the Sātavāhanas blockaded a port obviously to deprive them of financial gain from commercial transactions between their subjects and the foreign merchants. The usual profit from such kind of trade was probably considerable enough to at least give succour to the state ; otherwise there would have been no reason for the political enemies of the Sātavāhanas to try to impose this economic sanction.[22] This economic sanction might have been followed by the successful encorachment by the Kshaharāta family into the very heart of the Sātavāhana possessions of the Western Deccan. The success of the Kshaharātas in this area is indicated by some epigraphs found at Nasik, Karla and Junnar.[23]

The controlling authority of a port as well as a market town could levy taxes on articles of export and import. It was natural that thriving market centres would attract the coveting eyes of political powers. Hence without citing further instances of incidents of the nature discussed above from the pages of ancient Indian History, we may perhaps safely infer that kings and kingdoms took active interest in and were influenced by different factors of India's trade with the outside world. In a period, when India was very much in the map of the commercial world, foreign trade thus helped, along with other forces, in shaping her political destiny.

The specific instances cited above betray how economic considerations influenced the political activities of some of the ruling families in the flourishing age of Indo-Roman transactions. Our study of the history of the advent of the Kushāṇas in Shen-tu and Ākara (the conquest of the first territory having been one of their early political as well as military acts in India) should suggest that territorial ambition was not always the only motivating factor behind their invasions of other parts of the subcontinent. Unfortunately paucity of data does not allow us to fathom all the compelling reasons behind the progress of the Kushāṇa power in India. Nevertheless, their dependence on the fortune made out of taxes levied on articles of Indo-Roman commerce is fully bourne out by the simultaneous decrease of the Kushāṇo-Roman trade and the beginning of the decline of the Kushāṇa empire.

NOTES

1. The Yüeh-chih migrated from their habitat in Kansu to the "West" through probably the Northern route referred to in the *Ch'ien Han-shu.* This route was apparently used for trading activities. (See B. N. Mukherjee, *The Kushāṇa Genealogy* (*Studies in Kushāṇa Genealogy and Chronology*, vol. I), p. 121 ; L. Boulnois, *The Silk Road* (translated by D. Chamberlain), pp. 50-51 and 61f.
2. For the historical importance of the silk route, see L. Boulnois, *op. cit.*, pp. 7f and 61f.

3. *Bulletin de l'École Francaise d'Extrême-Orient*, 1903, vol. III, pp. 303 and 430.
4. K'ang-T'ai's *Wu shih wai kuo chuan* quoted in the *T'ai-p'ing Yu-lan* (composed between A. D. 977 and 983), ch. 359, p. 1650 a ; *Études Asiatiques*, vol. II, pp. 248-250. In this connection see also L Malleret, *L'archéologie du Delta du Mékong, Publications de l'École Francaise d'Ertrême-Orient*, vol. XLIII, pp. 362-371. The Chinese characters for the name of the country appearing in K'ang T'ai's passage in question should be transcribed as *Chia-ying* (O. W Wolters, *Early Indonesian Commerce, A Study of the Origin of Śrīvijaya*, p. 59) However, the country of Chia-ying was the same as that of Ko-ying (*ibid.*).The form *Ko-ying* seems to have been more well-known and so has been adopted by us. The last sentence of the passage may be very literally translated as follows. "If one escapes from its rein on the road and has to be held by its mane when it is shown to the king, the latter still buys it at half price" (*ibid.*).
5. *Études Asiatiques*, vol. II, p. 250.
6. *BSOAS*, 1960, vol. XXIII, pp. 342-343 ; O.W. Wolters, *op. cit.*, p. 60.
7. *India Antiqua* (*A Volume of Oriental Studies, Presented by his Friends and Pupils to Jean Philippe Vogel, C.I.E.*), pp. 167, 171-172 and 176 f ; pl. XIV, f.
8. *Ibid.*, pp. 167f.
9. *Ibid.*, pp. 169 and 174.
10. *San-Kuo Chih* (*Wu*), ch. 2, p. 19b. "With the decline of the Han dynasty and the consequent loss of control of the overland routes of the North-West...a small regular trade via the Nan-hai was established with India and the Roman Orient." For an account of this trade, see Wang Gungu, "The Nanhai Trade," *Journal of the Malayan Branch of the Royal Asiatic Society*, 1958, vol. XXXI, no. 2, pp. 31f.
11. *Shih-chi*, ch. 110, p. 6a. Chang Shou-chieh's eighth century

commentary on the *Shih-chi*, ch. 123, p. 4 b explicitly refers to "the abundance of horses among the Yüeh-chih." See also *T'oung Pao*, 1923, s. II, vol. XXIII, pp. 121-123 ; O. W. Wolters, *op. cit.*, p. 41 ; etc. It may also be recorded here that an envoy sent by a king of Fu-nan during the period of the Wei and sometime before K'ang T'ai's visit to Fu-nan, received from a king of T'ien-chu "four horses of the country of the Yüeh-chih" (Ma Tuan-lin, *Wên hsien t'ung k'ao*, ch. 328, notice on India ; *Mélanges Charles de Harlez* pp. 176-177.)

12. *Pei-shih* (Ssu-pu ts'ung K'an edition), ch. 97, p. 20 ; *BSOAS*, 1960, vol. XXIII, p. 347.
13. P. R. Coleman-Norton, (editor), *Studies in Roman Economic and Social History in Honour of Allan Chester Johnson*, p. 141.
14. Strabo, *Geographikon*, XV. 73.
15. W. H.Schoff, *The Periplus of the Erythraean Sea*, p. 197.
16. *Periplus*, sec. 52.
17. *Ibid.*.
18. W. H. Schoff, *op. cit.*, p. 180.
19. *Periplus*, sec. 52.
20. *EI*, vol. VIII, pp. 71, 73 and 98 ; *ASWI*, vol. V, pp. 75 and 78-79 ; *JA*, 1936, vol. CCXXVIII, pp. 62, 75 and 92 ; etc. The forms *Seṭagiri* (Nasik inscription of the year 19 of Vāśishṭhīputra Puḷumāvi) and *Seḍagiri* (Nagarjunakonoda epigraph of Vasushena) have been traced to the name *Setagiri* (*Śvetagiri*) (*ASWI*, vol. V, pp. 108, f.n.. 8 ; *EI*, vol. XXIV, pp. 200 and 203 ; *IHQ*, 1962, vol. XXXVIII, p. 237). On the analogy of this evidence, we may postulate the development *Sātakaṇi* >**Sāṭakaṇi* >**Sāḍakaṇi*. **Sāḍakaṇi* could have developed into **Sārakani* through the intermediary stage **Sārakaṇi*. *Sātakaṇi* and *Sātakani* are regular Prakrit forms of *Sātakarṇi* (*CCADWK*, p, 44, pl. VII, no. 176-177), It is also well-known that *ka* often changes into *ga* in Prakrit.

Hence **Sāragaṇi* and **Sāragani* (**Sāḍagani*) may have developed from Sātakarṇi. In several legends on coins of the Sātavāhana period one may notice the form *Sātakaṇa* or *Sātakana* (?) in place of the name *Sātakaṇi*=Sātakani=*Sātakarṇi* (*ibid.*, pp. 38-39 and 44f, pl. VII, nos. 175 and *El.*; A. Cunningham, *Coins of Ancient India*, pl. XII, no. 8 ; etc.). This suggests **Sātakaṇa* and *Sātakana* as alternatives of *Sātakaṇi*. and consequently indicates **Saragaṇ*ᵛ, and **Sāragana* as variants of **Sāragaṇi*. **Sāragaṇa* or **Sāragana* may have been the stem of the genitive singular from *Saraganou* i. e., of Saraganes or Saraganos, occurring in section 52 of the *Periplus*.

21. *CCADWK*, pp. XXVI, CXVIII, etc.; W.H.Schoff, *op. cit.*, pp. 197f ; B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 29-30 ; etc.

22. It is interesting to note that Ptolemy refers to Symulla, a locality in Ariakes (Appendix II), as an emporium (Ptolemy, *Geographike Huphegesis* I, 17). Symulla, indentifiable Chaul near Bombay, was apparently situated not for from Kalliena (or Kalyan, near Bombay), which Ptolemy neither includes in Ariakes, nor mentions it as an emporium. If the information of Ptolemy on Ariakes can be dated after that of the *Periplus* on Kalliena (for dates of these texts, see B. N. Mukherjee, *Kanishka I and the Deccan (The Kushāṇas and the Deccan*, pt. I), pp. 123-130), the economic sanction imposed by the enemies of the Sātavāhanas might have resulted in at least temporary closure of the port of Kalliena. (In this connection see also *JRAS*, 1946, pp. 170 f.)

23. *ASWI*, vol, IV, 99-103.

APPENDICES



APPENDIX I

PTOLEMY'S *EMPORION*

Several towns on or near the seacoast of East Africa, Arabia, India and South-East Asia are designated by Ptolemy as ***emporia.***[1] On the other hand, as E. H. Warmington has pointed out, in Ptolemy's survey of the "west"—mostly included in the Roman empire—and of Egypt, also under the Roman occupation, the word ***emporion*** (i. e., ***emporium***) does not occur at all[2] Again, the term in question is not attributed to all possible market-towns in or near littoral India.[3] It is also interesting to note that Sopara is indicated as a market-town by sources earlier than and contemporary with Ptolemy. The ***Periplous Tes Erythras Thalasses*** refers to Suppara (i. e., Sopara) as a market-town. In Ptolemy's ***Geography,*** however, Soupara (i. e., Sopara) is described apparently as an ordinary place, and not as an ***emporium.***[4]

These considerations definitely show that the word ***emporion*** (i. e., ***emporium***), as it appears in Ptolemy's treatise, has a restricted connotation.[5] The only conceivable import of the expression in question is that it denoted an Oriental market-town, lying on or near the sea-coast and beyond the imperial frontiers of Rome, in the commerce of which entrepot a Roman subject like Ptolemy might be at least academically interested. Such an explanation is perfectly in agreement with the discovery of a Roman trading station near

Pondicherry, identifiable with *Podouke emporion* of Ptolemy.[6] This explanation shows that E. H. Warmington is not correct in stating that Ptolemy generally designated as *emporia* only those sea-coast towns which the *Periplus* had called *nomima* and *enthesma*, even though he (i. e., Warmington) is right in concluding that this geographer used the term *emporion* in a restricted sense.[7]

NOTES

1. Ptolemy, *Geographike Huphegesis*, IV, 7 ; VI, 7 ; VII. 1, 3-15 and 62, VII. 2, 4, 5, 6, 7, etc.
2. E. H. Warmington, *Commerce Between the Roman Empire and India*, p. 107.
3. *ASWI*, vol. V, pp. 78, 82, etc.
4. *Periplus*, sec. 52.
5. Ptolemy, *op. cit.* VII, 1, 6.
6. *Ancient India*, no. 2, p. 124 ; Ptolemy, *op. cit.*, VII, 1, 14.
7. E. H. Warmington, *op. cit.*, p. 107. See also M. Wheeler, *Rome Beyond the Imperial Frontiers*, pp. 151-152 ; *Classical Quarterly*, vol. XLV, p. 157 ; etc.

APPENDIX II

ARIAKES

Ptolemy refers to a region of India Intra Gangam as Ariakes Sadinon.[1] Apparently the same area is called as Ariakes in another section of his treatise.[2]

It is well-known that Ptolemy included in Ariakes Sadinon many places, which, taken together, should have covered a great part of Western Deccan.[3] The word *Sadin(on)* (variants —*Sandano(rum)* and *Sadano(rum)* in Latin and *Saden(on) Sadan(on), Sadin(on), Adan(on), Adin(on), Aden(on)*, etc., in Greek versions) has already been connected with the name of the Sātavāhanas.[4] It appears that *Ariakes Sadinon* denotes a territory of Western Deccan ruled by the Sātavāhanas.

The term *Ariakes* is generally considered to have been, based on the India word *Aparāntikā* (Prakrit *Abarātikā* or *Avarāikā*).[5] However, it is very difficult to find any philological relation between the two expressions in question, even though Aparāntikā or Aparānta was, like Ariakes, situated in Western Deccan.

The word *Ariakes* and its variants—*Areiakes* in Greek, and *Ariacha, Arica*, etc., in Latin versions—indicate the Indian original as *Ariaka, Ariacha*, or *Arica*. All these forms can be philogically connected with the name of another teriritory, viz., *Āryaka* (*Āryaka* > *Āriyaka* > *Āriaka* > *Ārika*>*Arikha* = *Āricha*). *Āryaka* occurs in a list of countries and peoples in the *Brihat-*

saṁhitā[6] There is also no evidence which debars us from supposing the location of Āryaka in Western Deccan. In fact, Āryaka is referred to by the *Bṛihat-saṁhitā* in a list of countries and peoples of the south, which also includes such regions of Western India as *Kachchha, Girinagara,* etc.[7] Hence it may be suggested that *Ariak(es)* of Ptolemy was based on the Indian name *Āryaka* (literally meaning "the land belonging to the Āryas"?)

The *Periplous Tes Erythras Thalasses* (better known as the *Periplus Maris Erythraei*) locates the country of Arabikes after the Gulf of Baraca (i.e., the Gulf of Cutch in Western India).[8] The word *Arabikes* was emended by Stuck as '*Ariakes.*[9] This reading has been universally accepted, perhaps due to the fact that the form *Ariakes* actually appears in Ptolemy's *Geographike Huphegesis* as the name of an area of Western Deccan. The Indian original of the emended term bas been variously taken to be *Lāṭika,*[10] or *Aparāntikā,*[11] or *Āryaka.*[12]

It should, however, be pointed out that the Heidelberg University manuscript of the *Periplus* clearly indicates the reading of the intended name to be *Arabikes.* So we do not know whether it would be prudent enough to accept the the amendment and so any of the suggested Indian bases.

NOTES

1. Ptolemy, *Geographike Huphegesis*, VII, 1, 6.
2. *Ibid.*, VII, 1, 82.
3. S.N. Majumdar-Sastri (editor), *McCrindle's Ancient India as Described by Ptolemy*, pp. 39-45 and 176-179 ; *Our Heritage*, 1963, vol. IX, p. 64 ; *JAS*, 1963, vol. V, pp. 91-92 ; B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 32f.
4. L. Renou, *La Géographie de Ptolémée l'Inde* (*VII, 1-4*), pp. 3 and 35.
5. *IA*, 1878, vol. VII, p. 259 ; in this connection see also *JIH*, 1962, vol. XL, p. 44 ; and 1965, vol. XLIII, pp. 693-698.
6. *Bṛihat-saṁhitā*, XIV, 15 ; see also *BG*, vol. I, pt. I, p. 540.
7. *Bṛihat-saṁhitā*, XIV, 11 and 16.
8. *Periplus*, sec. 48.
9. H. Frisk, *Le Périple de la Mer Erythrée*, p. 14, f. n. 2.
10. Schoff, *Periplus*, pp. 174-175.
11. *IA*, 1878, vol. VII, p. 259.
12. C. Lassen, *Indische Alterthumskunde*, vol, XII p. 178 f.n. 1 ; *Journal Asiatique*, 1936, vol. CCXXVIII, pp. 73-74 ; H. C. Raychaudhury *The Political History of Ancient India* (5th edition), p. 485, f.n. 5 ; S. Chattopadhyay, *Śakas in India*, p. 37 ; etc.

APPENDIX III

THE LOWER INDUS COUNTRY AND THE BEGINNING OF THE INDO-ROMAN COMMERCE

The lower Indus area could be reached, probably from an early period, from the Kandahar area through the Bolan or the Mula Pass.[1] The lower Indus country was also entered from the west from prehistoric times by the Phusi and Rohel Passes.[2] Alexander left this region from Patala (or the Indus delta) and crossed the Arabios river (the Purali), the Gedrosian desert and other areas[3] located in Southern Baluchistan.[4] This route could have been used, if it was necessary, also in the post-Alexandrian age, even though, as Prof. E. H. Warmington has demonstrated, it was not favoured by the Greeks of Roman times.[5]

Thus the lower Indus country was connected with the outside world by various overland roads from a period prior to the inception of the Indo-Roman commerce.[6] This and also the situation of the southern portion of this territory on the Arabian Sea might have made its people aware of the importance of trade. That they followed commercial pursuits in the centuries immediately prior to the beginning of the Indo-Roman transactions was indicated by Agatharchides, who spoke in c. 2nd century B.C.[7] of the merchants from Potana, on (or near) the Indus (obviously the city of Patala in the Indus delta),[8] visiting the Fortunate Islands,[9] identified

with the modern Socotra, not far from the coast of Africa as well as of Arabia.[10] According to the report of Chag Ch'ien, prepared in the second half of the 2nd century B. C., the people of Ta-haia used to buy bamboo sticks and cloth from the shops of the *Shu* merchants in Shen-tu,[11] to be located in the lower Indus country.[12]

The commercial activities in the lower Indus region probably received a great impetus in the very initial period of the Indo-Roman commerce.

The unification in the second half of the 1st century B. C. of the major parts of the known Western World, Egypt and West Asia under the firm rule of the Roman empire offered to a vast area the security which was necessary for carrying on fruitful trade.[13] The demand in the Roman empire for Oriental goods, including articles of luxry like the exotic Chinese silk[14] as well as Indian products useful for medicinal and practical purposes[15] favoured the growth of contact between the Roman capitalists and the regions concerned.

The main volume of this trade was carried by ocean as well as by land-cum-sea routes.[16] The direct maritime intercourse with India and indirect connection with China through, *inter alia*, the Indian territory (at least in the first hundred and fifty years of the Roman empire) enabled the merchants of the Roman dominions to avoid the lands of the extortionate and unco-operative Imperial Parthians and other hostile peoples.[17] Thus the sea provided a comparatively economic, if not wholly safe, passage.[18]

The Roman emperors in their turn encouraged such

commerce in practice, if not by policy.[19] Available testimonies do suggest the maintenance of well-paved roads for both military and commercial purposes,[20] the ability of the Roman navy to protect sea-borne traffic,[21] and the official attempts to divert trade from the ports on the eastern shores of the Red Sea to the Egyptian ones under the Roman rule.[22] It was also natural for the Roman emperors to help the growth of a trade detrimental to the financial interests of the inimical Imperial Parthians.[23]

The Indians, though they probably did not initiate this Indo-Roman intercourse,[24] quickly responded to it. The commercial character of the Indian embassies sent to Augustus is now well recognised[25] (see also above p. 39).

The enthusiasm of the Indians for the Indo-Roman commerce need not cause any surprise. For the financial balance of this trade was always in favour of India.[26] Pliny referred to the drainage of great amount of Roman coins from the empire as the price for Indian wares.[27] Emperor Tiberius was anxious to stem the flow of the Roman money to foreign and unfriendly peoples.[28] Archaeological corroboration of these literary testimonies is provided by the large number of Roman species found in India, mostly in its peninsula.[29]

Merchants of the Roman empire also made considerable gains from the Indo-Roman commerce. Pliny stated that Indian wares were "sold......at fully one hundred times their prime cost".[30] According to the *Hou Han-shu,* the people of Ta-ch'in (the Oriental provinces of the Roman empire)[31] had "traffic by sea with......T'ien-chu, the profit of which trade is tenfold".[32]

Two definite stages can be detected in the growth of this important commerce. Indo-Roman transactions began during the rule of Augustus (27 B.C.-A.D. 14).[33] The Indians had become interested in them by the time Augustus received the first embasy known to have been sent to the Roman empire from India, probably in 26 or 25 B.C.[34] That the volume of Indo-Roman trade was already considerable in the early years of the principate of Augustus was indicated by Strabo, who stated that "when Gallus was perfect of Egypt, I accompanied him and ascended as far as Syene and the frontiers of Ethiopia, and I learned that as many as one hundred and twenty vessels were sailing from Myo Hormos to India, whereas formerly, under the Ptolemies, only a very few ventured to undertake this voyage and to carry on traffic in Indian merchandise."[35] Since the ports of the lower Indus countty must have been the first important tradings stations in India for sailors voyaging along the coast from the west, at least some of these localities should have become centres of Indo-Roman commerce since its inception.

No doubt, as we have shown elsewhere, in the year 26 or 25 B. C. the lower Indus country to west of the Indus might have been under the Imperial Parthians, who were unfriendly to the Roman empire.[36] But, the influence of the Imperial Parthians or the Arsacids in the lower Indus country was extinct certainly by c. 1 B.C. and or even by any year after c. 26 or 25 B.C.[37] Moreover, sailors from the Roman dominions would not dislike to trade with the lower Indus country to the east of the Indus, which was never ruled by the Impe-

rial Parthians[38]. Thus at least some ports of the latter territory should have been among the most important Indian emporia visited by the seafarers and merchants of the Roman empire from the very beginning of the Indo-Roman oceanic transactions. And by c. 1 B.C. or even by any year after c. 26 or 25 B.C., and so in the very initial period of such intercourse, some ports of the lower Indus country might have become associated with it.

The socond stage in the growth of the Indo-Roman commerce was reached when the Roman navigators began to make regular use of the monsoon winds in the Indian waters. With the help of the favourable winds they could sail to India through more direct routes and and so could visit Indian ports with greater frequency in comparatively less time. This meant phenomenal increase in the volume of trade.

A date for the adoption of this new method in sailing may perhaps be suggested. After refering to the coasting of the fleet of Alexender from Xylinepolis (apparently in the region of the lower Indus country)[39] to Charax (not far from the head of the Persian Gulf)[40] and beyond, a well-known passage of Pliny states that "subsequently it was thought that the safest line is to start from Syagrus (*Ras Fatak*)[41] in Arabia with a west wind (the native name for which is Hippalus) and make for Patala (*in the Indus delta*)......The next generation considered it a shorter and safer route to start from the same cape and steer for the Indian harbour of Sigerus (*Jaigarh*),[42] and for a long time this was the course followed, until a merchant dis-

covered a shorter route,and the desire for gain brought India nearer"[43] (*italics ours*). Pliny alludes to Muziris (near the mouth of the Periyar river)[44] as the first Indian port of call following the last mentioned course.[45]

Pliny here clearly refers, as is now well recognised,[46] to four stages in the development of the sailing courses pursued by the western pilots visiting India. He also indicates in another place that "the fourth stage" was reached not much earlier than the date of his statement in question,[47] which again should be placed in or a few years earlier than A. D. 77, when he dedicated his work concerned.[48] And since the third stage was followed for a long time and the second for a generation, the initial year for the introduction of the regular use of the "west wind" or the monsoon wind into the system of "western" navigation should not be placed later than the epoch of the Christian Era.[49]

This suggestion[50] seems to be supported by the evidence of the author of the *Periplus*. His account of sailing courses to India indicates the "discovery" of the Hippalus or the monsoon winds by a person called Hippalus in a time considerably prior to the period of his own navigations to that country.[51] And since, as we have shown elsewhere, at least some portions of his information about India should be placed in or near the middle of the 1st century A. D.,[52] the discovery or rather the acquisition of the knowledge of the monsoons by Hippalus, probably from some Indian or Arabian sea-farers,[53] cannot be dated much later than c. A. D. 1.[54]

On the other hand, there are reasons to suggest that the required date should not be placed much earlier than the

beginning of the Christian Era. Strabo wrote a treatise on geography, betrayed interest in the flowing of winds,[55] and learnt in course of his visit to Syene and the Ethiopian frontiers, that 120 ships were then sailing from Myos Hormos to India.[56] And yet he did not notice the use of the monsoon winds. This silence, as indicated by M. P. Charlsworth,[57] is very significant. It can be explained only on the supposition that at the time of Strabo's writing his geography in c. 7 B. C.[58] or at least at the time of his visit to Syene and the Ethiopian frontiers sometime in the period from 25 B.C. to c. 20 B. C.[59] sailors of the Roman empire had not yet begun to avail themselves of the monsoon winds.

Pliny definitely indicates that his description of the first of the four maritime routrs to India, referred to above, is based on the reports of Alexander's companions and the narration of Juba.[60] Pliny's information about the other three sailing courses, which stretched across the open seas from Arabia[61] and the pursuing of any of which presupposed knowledge of the monsoons, was apparently not derived from any account of Juba.[62] This seems significant in view of the fact that Pliny's description of Arabia was mainly based on the data furnished by the Roman army led by Aelius Gallas into that country and on Juba's treatise on the same region, which also described the expedition of Gallus.[63] This would suggest that navigators of the Roman empire did not begin to use the monsoons regularly before Aelius Gallas' military venture in c. 25-24 B. C,[64] or probably prior to the date of Juba's work on Arabia, dedicated to Gaius Caesar in c. 1 B. C.[65]

These considerations tend to show that Roman sailors began to navigate with the help of the monsoons from sometime in or very near to A. D. 1.[66] Hence the date in question may be placed in c. A. D. 1.[67]

Once seafarers of the Raman empire began to use the monsoons,[68] they took to visiting the lower Indus country more frequently, for the voyage had then become much shorter. This must have ushured in an era of unprecendented commercial activities in that country.[69]

NOTES

1. E. H. Warmington, *The Commerce Between the Roman Empire and India*, p. 21 ; *CHI*, vol. I, p. 564.
2. N. G. Majumdar, *Explorations in Sind, Memoirs of the Archaeological Survey of India*, no. 38, pp. 153-154.
3. Arrian, *Anabaseos Alexandrou*, VI, 21-27.
4. *The Geographical Journal*, vol. CII, pp. 213f.
5. E. H. Warmington, *op. cit.*, pp. 21-22 and 24-25.
6. Several trade routes ran through the lower Indus country during the age of Indo-Roman trade.

   Ptolemy's Indo-Scythia included at least two series of towns on each side of the Indus, one along the river and the other at some distance from it (Ptolemy, *Geographike Huphegesis*, VII, 1, 55-62). And if Ptolemy used itineraries of merchants in enumerating towns of India (Ptolemy, *op. cit.*, I ; *Bulletin of the School of Oriental and African Studies*, 1950, vol. XIV, p. 78), we can trace the alignments of four different land-routes in the lower Indus region of Indo-Scythia.

The *Periplus* indicates that the middle channel of the Sinthus (or the Indus) in Scythia was navigated for the transport of articles of commerce, and that marketable commodities were brought by an overland route from the latter country to Barygaza (*Periplus*, secs. 38, 39 and 48).

It may perhaps appear from the prose section of a Jātaka story, (*Vannupatha Jātaka* ; see C. Fausboll, *Jataka*, vol. I, p. 107), ascribable to the early Christian centuries or before (*AIU*, p. 405), that a road to the Sind region from the east lay acoross a desert. The desert was of course that of Rajasthan.

The *Periplus* alludes to silk yarn and cloth as being brought on foot from Thina, i. e., China, and through Bactria to Barygaza (*Periplus*, sec. 64 ; W. H. Schoff, *The Periplus of the Erythraean Sea*, p. 261). The author of the *Periplus* also speaks of the export of Chinese silk from Barbaricum in Scythia (*Ibid*, sec. 39). Silk was probably imported into Scythia by a similar route.

According to a piece of information in the 118th chapter of the *Hou Han-shu*, presumably based on Pan Yung's report of c. A. D. 125, one could travel through Hsien-tu to Chi-pin and thence to *Wu-yi-shan-li* (Sakastan) (*HHS*, ch. 118 ; *T'oung Pao*, 1907, s. vol. VIII, p. 175). We may assume that goods were carried through this Chi-pin (which included parts of North-Western India) to Shen-tu (in the lower Indus area) lying to its south.

Pliny traced (probably on the authority of Alexander's companions) a high way from the Caspian Gates to the Beas via Alexandria of the Arii (in Herat), the city of the Arachosii (=Alexandria in Kandahar ?), Hortospana (Kabul), Peucolatis (Charsada) and Taxilla (Taxila) and other cities (Pliny, *Naturalis Historia*, VI, 21, 61-62). The main channel of the Indus, which flowed somewhere between Peucolatis and Taxila, could be used in the age of Indo-Roman commerce for the transport of articles through this route. In fact, one

passage of Pliny indicates the navigability of the main channel of the Indus (*ibid.*,[1] VI, 23, 72), while another speaks of the distance betwen the extreme point of Patala (or the India delta) and the Caspian Gates (*ibid.*, VI, 23, 76), and thereby suggests that routes from Caspian Gates ran into the lower Indus country.

Maritime routes conneted the lower Indus country with the outside world.

A passage in the *Milindapañha* VI, 21, 360, indicates regular sailing of a ship, owned by a wealthy person, to Vaṅga (in the southern part of undivided Bengal), Takkola (Takola emporium of Ptolemy located on the north-west coast of the Malay peninsula), China, Sovīra (including the lower Indus country to the east of the Indus). Suraṭṭha (Surāshṭra incorporating at least the southern Kathiawad), Alasanda (Alexandria in Egypt), Kolapaṭṭana (Kolipolis of Ptolemy placed on the sea-shore of North-East Malaya). Suvaṇṇabhūmi, etc. during the period of the composition of that treatise, which may be ascribed to about the beginning of the Christian Era (T. W. Rhys-Davids, *The Question of King Milinda*, *SBE*, vol. XXVI, pt. I, p. XL). And since the ship-owner in question is not referred to as a *Yavana*, it is not impossible that sailors and merchants of Indian origin used to visit the lower Indus country, South-East Asia, Egypt (in the Roman empire), etc., even in the early decades of the first century A. D.

The author of the *Periplus*, considered to be a Greek resident in Roman Egypt and himself a participant in the Indo-Roman trade, appears to have personally visited Scythia (including at least a part of the lower Indus country) (*Periplus*, sec. 38). He expressly states that ships sailing from Cana (modern Hsin Ghorab on the south coast of Arabia) or from the Cape of Spices (Ras Asir or Cape Guardafui in littoral Africa), and "bound for Barygaza and Scythia keep along the shore not more than three days and for the rest of the time

committing themselves to the favourable monsoon wind which blows right in the direction of their course, they stand far out to sea, leaving all the gulfs......in the distance" (*Periplus*, sec. 57).

On another occasion the writer of the *Periplus* states that the ships destined for the port of Barbaricum in Scythia put out to sea "when the Indian Etesian winds prevail, about the month of July, i. e., Epiphi ; it is more dangerous then, but through these winds the voyage is more direct, and sooner completed" (*ibid.*, sec. 39). However, we do not know whether this observation is related to the last noted passage of the *Periplus*, which is not unlikely, or refers to some other sailing course.

The *Periplus* also refers to the maritime commerce between Cana and Scythia (*ibid.*, sec. 27) and to serveral articles imported into the territory of Zoscales (in East Africa) "from the district of Arabica across the sea" (*ibid.*, secs. 5-6).

A passage in the *Hou Han-shu's* notice on Shen-tu probably indicates that it had reciprocal commercial connection with *Ta-chin* or the Roman Orient (*HHS*, ch. 118, p. 110 ; *T'oung Pao*, 1915, s. II, vol XVI, p. 690).

7. *Oxford Classical Dictionary*, p. 20.
8. See Ptolemy, *op. cit.*, VII, 1, 59.
9. This observation of Agatharchides was quoted by Diodorus (*Bibliothekes Historikes*, III, 47) and also alluded to by Photius (C. Muller, *Geographi Graeci Minoris*, vol. I, p. 191).
10. W. H. Schoff, *The Periplus of the Erythraean Sea*, pp. 133-136.
11. *CHS*, ch. 61 ; *Shi-chih*, ch. 116 and 123 ; *The Journal of the Anthropological Institute*, 1881, vol. X, p. 67 ; B. Watson, *Records of the Grand Historian of China by Ssu-ma Ch'ien*, vol. II, p. 293 ; *JAOS*, 1917, vol. XXXVII, p. 98 ; East, 1967, vol. I, p. 322.

Did the Shu merchants, obviously from Shu in the zone of Chinese influence (A. Herrmann, *Historical and Commercial Atlas of China*, p 13), came to Shen-tu by land or sea or both ?

For the growth of the Chinese sea trade, see Wang Gungwu, "The Nanhai Trade," *Journal of the Malayan Branch of the Royal Asiatic Society*, vol. XXXI, pt. II, pp. 1f.

12. *Our Heritage*, 1967, vol. XV, pp. 1-12.
13. *Ibid.*, p. 1 ; M. Rostovzeff, *The Social and Economic History of the Roman Empire* (2nd edition), vol. I, p. 56.
14. *Periplus*, sec 39 ; Pliny, *op. cit.*, XII, 25, 41f ; XII, 41, 84 ; XII, 42, 88.
15. *Periplus*, sec. 39, 49, etc. ; Pliny, *op. cit.*, XII, 15, 31 ; XII, 37 77 ; etc. ; E. H. Warmington, *op. cit.*, pp. 180f. This contradicts Rostovzeff's observation that "taken all together, the foreign trade was almost wholly a trade in luxuries and had no real importance for the economic life of the (Roman) empire" (M. Rostovzeff, *op. cit.*, p. 67).
16. E. H. Warmington, *op. cit.*, pp. 30, 34 and 50f.
17. *HHS*, ch. 118 ; *T'oung Pao*, 1907, s. II, vol. III, p.185 ; M. Cary *et al.* (editors), *The Cambridge Ancient History*, vol. XI, pp. 97-98 and 121f.
18. Pliny, *op. cit.*, VI, 26, 101 ; see also E. H. Warmington, *op. cit.*, p. 14.
19. P. R. Colemon-Norton (editor), *Studies in Roman Economic and Social History in Honour of Allan Chester Johnson*, p. 138.
20. *Ibid.*, p. 179 ; M. Rostovzeff, *op. cit.*, p. 66.
21. Pliny, *op. cit.*, VI, 26, 101 ; M. Rostovzeff, *op. cit.*, p. 66 ; P. R. Coleman-Norton, *op. cit.*, pp. 138-39.
22. P. R. Coleman-Norton, *op. cit.*, p. 139 ; see also E. H. Warmington, *op. cit.*, pp. 14f. "It was to the Emperor's advantage to encourage ...this preoccupation with professional and business matters, since it induced political apathy." (M. Cary *et al.*, *op. cit.*, vol. X, pp. 388)
23. For an account of rivalry between the Parthian and the Roman empires, see N. C. Debevoise, *A Political History of Parthia*, pp. 143f. See also F. Stark, *Rome on the Euphrates, the Story of a Frontier*, pp. 130 f.
24. E. H. Warmington, *op. cit.*, pp. 1-2.

25. P. R. Coleman-Norton, *op. cit.*, p. 141. See also below n. 69.
26. E. H. Warmington, *op. cit.*, pp. 38-39 ; and 272f.
27. Pliny, *op. cit.*, VI, 24, 101 and XII, 41, 84.
28. Dio Cassius. *Romaike Historia*, LVII, 15 ; Tacitus, *Annals*, III, 55 and II, 33.
29. E. H. Warmington, *op. cit.*, pp. 280f ; *Ancient India*, no. 2, pp. 116-121
30. Pliny, *op. cit.*, VI, 24, 101.
31. F. Hirth, *China and the Roman Orient*, pp. 207f ; *T'oung Pao*, 1915, s. II, vol. XVI, pp. 690-691.
32. *HHS*, ch. 118 ; *T'oung Pao*, 1907, s. II, vol. VIII, p. 185.
33. E. H. Warmington, *op. cit.*, p. 39 ; *Oxford Classical Dictionary*, pp. 122-123.
34. E. H. Warmington, *op. cit.*, p. 36.
35. *Strabo, Geographikon*, II, 5, 12 ; *Oxford Classical Dictionary*, p. 379.
36. B. N. Mukherjee, *An Agrippan Source—A Study in Indo-Parthian History*, p. 22.
37. *Ibid.*, p. 97.
38. *Ibid.*, pp. 61 f.
39. See Arrian, *Indike*, XX-XXI.
40. W. H. Schoff, *op. cit.*, p. 149.
41. *Ibid.*, p. 133.
42. *Ibid.*, p. 201.
43. Pliny, *op. cit.*, VI, 26, 96-101.
44. V. Kanakasabhai, *The Tamils Eighteen Hundred Years Ago*, p. 18.
45. Pliny, *op. cit.*, VI, 26, 104. All the sea-routes from the Roman empire to India started from Berenice and Myos Hormos in Egypt (*Periplus*, sec. 1 ; Pliny, *op. cit.*, VI, 26, 103-4).
46. E. H. Warmington, *op. cit.*, pp. 44-45.
47. Pliny, *op. cit.*, VI, 26, 101.
48. *Ibid.*, preface.
49. A section of Pliny's *Naturalis Historia*, which speaks of some authori-

ties on which are based his observations on the four sailing courses to India, states that "it is suitable to indicate the facts reported by Onesicritus after sailing with the fleet of Alexander......(and the facts) quite recently related in detail by Iuba (i. e., Juba), and then to state the sea-route that has been ascertained in recent times and is followed at the present day" (Pliny, *op. cit*., VI, 26, 96).

The account of the first of the four sailing courses is undoubtedly based on the narrations of the companions of Alexander including Onesicritus (and Nearchus) (Pliny, *op. cit.*, VI, 26, 96) and on the writings of Juba. Hence the other three maritime routes seem to be characterised in this passage of Pliny as having been "ascertained in recent times." And since the pursuing of any one of the latter three sailing courses, but not of the first one, presupposes the knowledge of the monsoons, it may be argued that such winds began to be used by sailors of the Roman empire not much earlier than the date of Pliny's work in question.

It can, however, be pointed out that Pliny sometimes described events happened apparently several decades earlier, as "recent" ones. The above quotation from Pliny's treatise indicates Juba, who died in c. A. D. 23 (C. Muller, *Fragmenta Historicorum Graecorum,* vol. III, p. 466 ; *OxfordClassical Dictionary*, p. 469), as having composed his work "quite recently." In another place Pliny spoke of Dionysius, who had been sent to the East by Augustus on the eve of Gaius Caesar's departure for Armenia in 1 B. C. (Pliny, *op. cit.*, VI, 31, 141 ; *Oxford Classical Dictionary*, p. 253), as "the most recent writer dealing with the geography of the world" (Pliny, *op. cit.*, VI, 31, 141). Thus any incident, described as "recent" by Pliny, need not necessarily be placed near the date of the dedication of his book in A. D. 77.

50. In this connection see also the *Classical Quaterly*, vol. XXII, p. 94.

51. *Periplus*, sec. 57.

52. B. N. Mukherjee, *Kanishka I and the Deccan* (*The Kushāṇas and the Deccan*, pt. I), pp. 29-30, 104 and 122-124.

53. Schoff, *Periplus*, p. 6.

54. The discovery of Hippalus has been dated to A. D. 47 by W. Vincent (W. Vincent, *The Periplus of the Erythraean Sea*, vol. II, p. 56) and to A. D. 45 by W. H. Schoff (*op. cit.*, pp. 8 and 227f). (See also E. H. Rawlinson, *Intercourse Between India and the Western World*, p. 109). These theories, however, ignore, as Prof. E. H. Warmington thinks (E. H. Warmington, *op. cit.*, p. 47), the different stages in the development of the use of the monsoons, as indicated by Pliny.

According to Prof. E. H. Warmington, "in the reign of Claudius the secret of the monsoons was finally revealed to a western pioneer". Prof. E. H. Warmington points out, on the basis of the evidence of Pliny, that a freedman of Annius Plocamus was carried away helplessly by winds to Ceylon sometime in the reign of Claudius. From this it is concluded that the person concerned "did not know the use of the monsoons in order to reach Ceylon", and so sailors of the Roman empire had not yet made the discovery of the proper use of the monsoons. It is suggested that the final stage in the development of the use of the monsoons was reached about A. D. 50. Hippalus, who may have made the initial direct voyage to the Indus (*Pliny*, *op. cit.*, VI, 26, 100), is considered, following Kornemann and Chwostow, to have lived in the 1st. century B. C. (E. H. Warmington, *op. cit.*, pp. 43-48 ; *Oxford Classical Dictionary*, p. 428).

We do not question the probability of the final stage in the development of the use of the monsoons, as indicated by Pliny, having been reached in the reign of Claudius or still later. However, the evidence of the episode of the freedman of Annius Plocamus can only indicate, if it is correctly ascribed to the reign of Claudius (*The*

Journal of Roman Studies, vol. XLIII, p. 38 ; M. Wheeler, *Rome Beyond the Imperial Frontiers*, p. 155), the ignorance of the person concerned of the proper use of the monsoon, and does not necessarily refer to the state of knowledge of sailors of the Roman empire in general.

Hippalus may have lived in the 1st century B. C. But there is no reason to suppose that he made his "discovery" much earlier than the beginning of the Christian Era. (see below n. 66). Prof. E. H. Warrington has stated in one place that "between the reign of Tiberius and end of Gaius' reign (A. D. 40-41) men started" to sail across the sea to Patala on the Indus", and that "this must be taken as a part of Hippalus' discovery." (E. H. Warmington, *op. cit.*, p. 45).

55. Strabo, *op. cit*, I, 2, 20-21 ; XV, 1, 34, etc.
56. *Ibid.*, II, 5, 12 ; *Classical Quaterly*, vol. XXII, p. 95.
57. *Ibid.* ; see also E. H. Bunbury, *A History of Ancient Geography*, vol. II, p. 351.
58. H. L. Jones, *The Geography of Strabo*, p. XXV. Although Strabo revised his work on geography in c. A. D. 18 (*ibid.*, p. XXV) or even still later (Strabo, *op. cit.*, XVII, 3, 7 ; Tacitus, *Annals*, IV, 5 and 23), all of his antiquated pieces of information were not made up-to-date. (H. L. Jones, *op. cit.*, pp. XXV-XXVI). Hence any datum furnished in his treatise, which cannot be dated after c. 7 B. C. (when he probably composed his treatise in question), may be placed in or before that year.
59. Strabo was in Egypt from 25 B. C. to 20 B. C. (H. L. Jones, *op. cit.*, p. XX ; Strabo, *op. cit.*, II, 5, 12 ; XIV, 1, 14, etc). With Aelius Gallus, the prefect of Egypt, he visited Syene and the Ethiopian frontiers (*ibid.*, II, 5, 12).
60. Pliny, *op. cit.*, VI, 26, 96 (see also above n. 50).

61. *Ibid*, VI, 26, 100-101 and 104.

62. *Ibid*., VI, 26, 96. See also above n. 50.

63. *Ibid*. VI, 31, 141 ; VI, 32, 160.

64. S. A. Cook *et. al*., *op. cit*., vol. X, p. 250.

65. Pliny, *op. cit*., VI, 31, 141 ; XII, 31, 56 ; E. H. Bunbury, *op. cit*., p 176 ; S. A. Cook *et. al*., *op. cit*., vol. X. p. 253.

66. Korneman interpreted the passage of Pliny referring to the development of maritime routes to India (VI, 26, 100-101) and the epigraphs mentioning a "general of the Indian Sea and the Red Sea" as suggesting that the date of Hippalus, the "discoverer" of the Hippalus or monsoon wind, should be referred to the late Ptolemaic period in Egypt and to a time considerably prior to the Augustan age (*Janus*, 1921, vol. I, pp. 55f).

W. W. Tarn concluded, on the basis of the same passage of Pliny, that the Hippalus wind began to be used in 90-80 B. C. (W. W. Tarn, *The Greeks in Bactria and India*, 2nd edition. pp. 368-369).

W. Otto and H. Bengtson think that the use of the Hippalus wind probably began from the date of Eudoxus' sea voyage to India during the reign of Euergetes II of Egypt (146-117 B. C.). An Indian acted as a guide during this journey (Strabo, *op. cit*., II, 3, 4). Otto and Bengtson also observe that a Greek inscription, dated in 110/109 B. C., referring to a "general of the Indian Sea and the Red Sea", supports such a theory. (W. Otto and H. Bengtson, "Zur Geschichte des Niederganges des Ptolemaerreichs", *Abhandlungen der Bayerischen Akademie der Wissenschaften, Philosophisch-historische Abteilung*, 1938, *ns*, vol. XVII, pp. 5, 22, 206 and 209-210 ; *Pauly*, vol. VIII, cols. 1660-1661).

These arguments are, however, not much impressive. Pliny's evidence in question does not necessarily refer to the use of the Hippalus wind in so early periods as thought by Kronemann and Tarn. There is also nothing to suggest that Pliny's knowledge of the

Hippalus wind was in any way derived from the accounts of Juba written much earlier than the date of the *Naturalis Historia* (see above n. 49). (*Classical Quarterly*, vol. XXII, p. 94-95).

The story of Eudoxus cannot be of any help in fixing the date of the first use of the Hippalus wind by a resident of Egypt. For not only the Indian guide of Eudoxus had previously lost his course in sea but also Eudoxus himself was carried away by winds above Ethiopia during his second return journey from India (Starbo, *op cit.*, 11, 3 4). Hence probably neither that particular Indian nor Eudoxus knew the proper use of the monsoons. They might have been acquainted with only one maritime route to India stretching along the seacoast.

The epigraphic evidence from Egypt referring to a "general of the Indian Sea and the Red Sea" may indicate some interest of Egypt in trade in the Indian waters, but does not presuppose the use of the monsoons by Egyptian sailors (see also the *Classical Quarterly*, vol. XXII, p. 94). Moreover, it is doubtful whether direct commercial transactions between India and Ptolemaic Egypt were ever considerable. According to Strabo, very few people in the days of the Ptolemies ventured to undertake sea voyage to India and to carry on trade in Indian merchandise (Strabo, *op. cit.*, II, 5, 12).

For references to other discussions on the date of Hippalus, see the *Journal of the University of Bombay*, vol. XXV, pp. 9-16. See also H. P. Chakravarti, *Trade and Commerce of Ancient India* (c. 200 B. C.-c. 650 A. D.), p. 212 ; B. Srivastava, *Commerce in Ancient India*, pp. 103-105 ; G. Adhya, *Early Indian Economics*, relevant pages ; etc.

67. M. P. Charlsworth thinks that "the discovery of Hippalus" took place between 20 and 10 B. C. This scholar takes into account Pliny's description of the development of sea-route to India and the date of the period (25-20 B. C.) in which Strabo collected his information about ships sailing to India (*Classical Quarterly*, vol. XXII, pp. 94 97). We should, however, admit the probability of

Strabo having a more up-to-date information about Indo-Roman commerce at the time of writing his geography in c. 7 B. C. than what he had in 25 or 20 B. C.

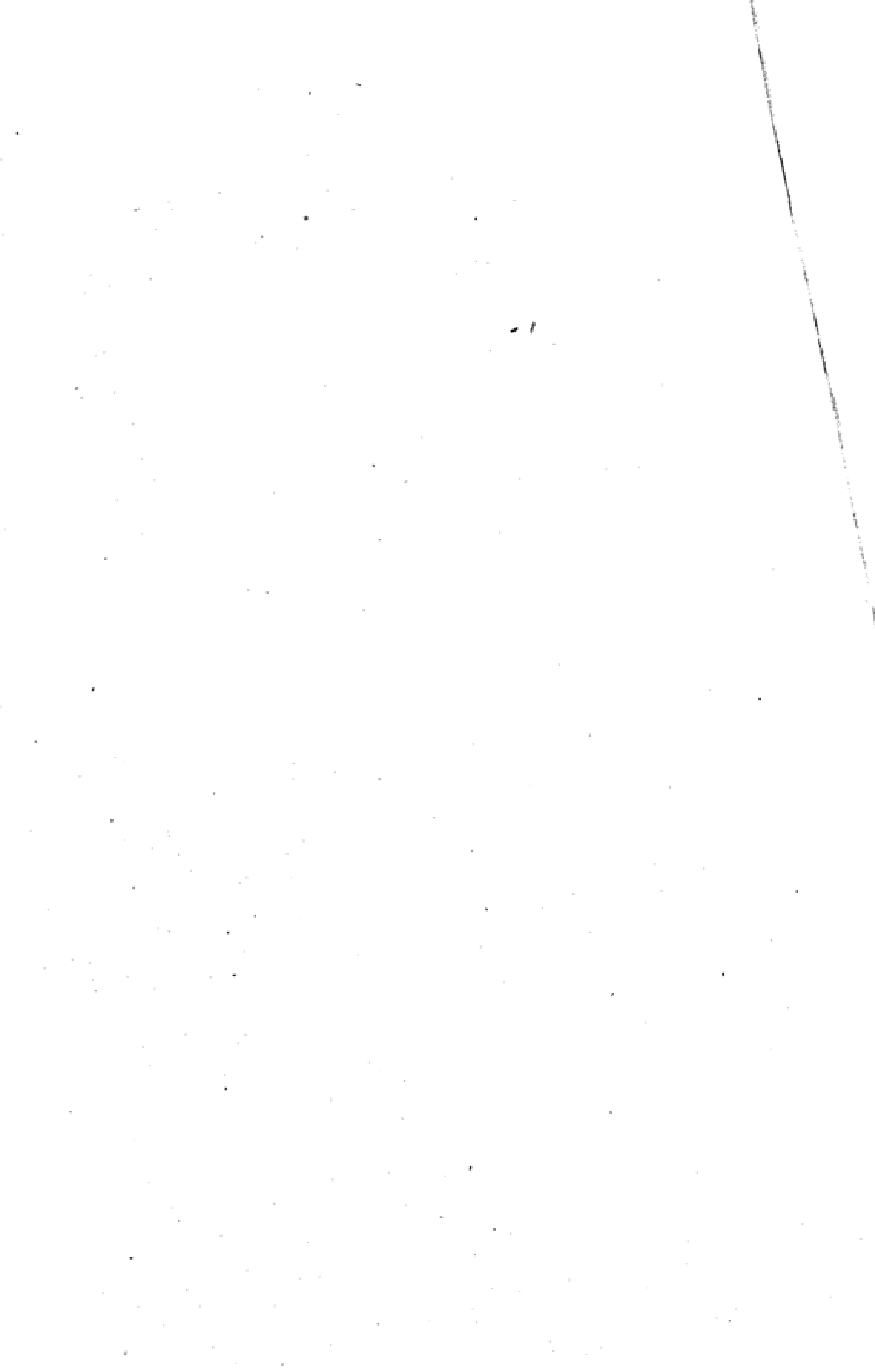
Shreds of Arretine pottery have been found at the Roman trading-station at Arikamedu. Since Arretine wares of the kinds in question are known to have been manufactured from c. 30 B. C. to c. A. D. 45, M. Wheeler fixes the date of their export to Arikamedu in the first two decades of the 1st century A.D. The existence of Arikamedu and some other Roman trading-posts on the east coast of the Indian peninsula postulates regular trade of that part of India with the West, and this in its turn implies the use of the monsoons. From this Wheeler concludes that the latter was in use at the end of the reign of Augustus (A. D. 14). (M. Wheeler, *op. cit.*, pp. 156-157).

Wheeler's arguments may to some extent corroborate our conclusion. However, it must be conceded that goods brought by a coasting voyage to the western part of the Tamil country could be transferred to the eastern coast of the peninsula by overland routes and this process did not necessarily imply the knowledge of the monsoons. (See also *ibid.*, pp. 171-172 ; P. R. Coleman-Norton, *op. cit.*, pp. 135-136, etc.).

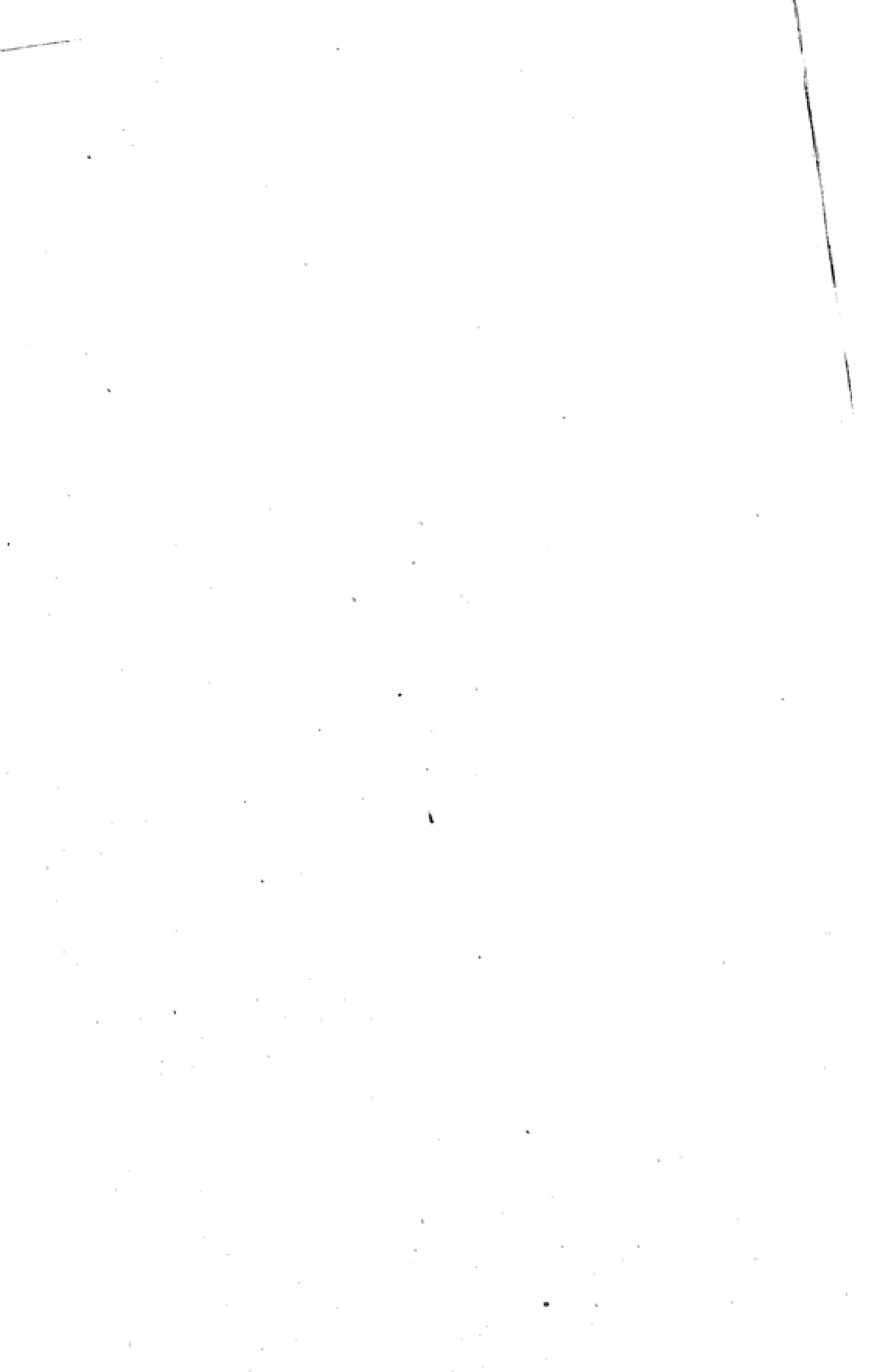
68. It may also be noted that the Greeks might have heard of "the (Indian) Etesian winds" or the monsoon winds even in the days of Alexander (Arrian, *Indica*, sec. XXI ; Strabo, *op. cit.*, XV, 1, 34 ; Pliny, *op. cit.*, VI, 26, 102). But there is no evidence to suggest that they availed themselves of the monsoons before the time of the Roman empire.

69. We should admit here that a few powers dominating some parts of the Indian subcontinent other than the lower Indus region might have become interested in the Indo-Roman commerce from its early days.

E. H. Warmington has analysed Strabo's version (XV, 1, 73) of the Indian embassy sent to Augustus (E. H. Warmington, *op. cit.*, pp. 35-37 and 107) and has concluded that this had telescoped accounts of several such embassies including the one from Bargosa, i. e., Broach on the Narmada in Western Deccan. Since in the period of Augustus (27 B. C.-A. D. 14) Western Deccan was under the Early Sātavāhanas, Broach might have been then included in their kingdom. So the embassy from Bargosa might have been sent by them. And since the commercial imporatance of the Indian embassies sent to Rome is well-known, we may see in this act of the Early Sātavāhanas an evidence of their interest in the Indo-Roman commerce.



LIST OF ABBREVIATIONS

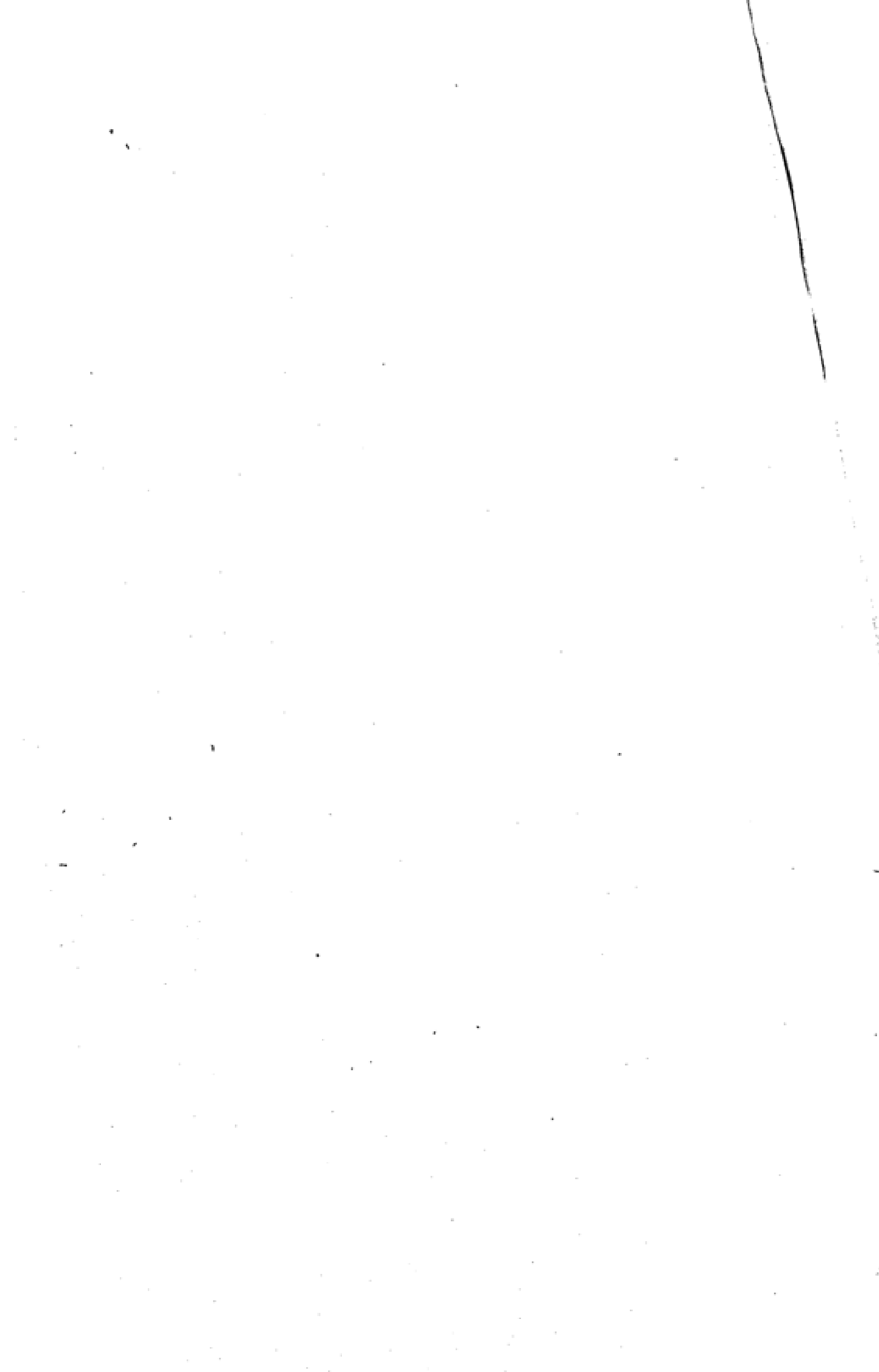


LIST ON ABBREVIATIONS

ASWI	*Archaeological Survey of Western India* (edited by Bureges, Jas.), London.
BG	*Gazetteer of the Bombay Presidency*, vol. I, parts I and II, Bombay, 1896.
CAH	Cook, S. A., Adcock, F.E. and Charlesworth, M. P. (editors), *The Cambridge Ancient History*, vol. X, Cambridge, 1933.
CCADWK	Rapson, E. J., *A Catalogue of the Indian Coins in the British Museum, Catalogue of the Coins of the Andhra Dynasty, the Western Kṣatrapas, the Traikūṭaka Dynasty and the "Bodhi" Dynasty*, London, 1908.
CHI	Rapson, E. J. (editor), *The Cambridge History of India*, vol. I—*Ancient India*, Cambridge, 1922.
CHS	Pan Ku, *Ch'ien Han-shu* (T'ung-wen shu-chü edition).
EI	*Epigraphia Indica*, Calcutta and Delhi.
HHS	Fan Yeh, *Hou Han-shu* (Ssu-pu pie-yao edition).
IA	*Indian Antiquary*, Bombay.
IHQ	*The Indian Historical Quarterly*, Calcutta.
JAOS	*Journal of the American Oriental Society*, New Haven (Connecticut)

JAS	*The Journal of the Asiatic Society*, Calcutta.
JASB	*The Journal of the Asiatic Society of Bengal*, Calcutta.
JNSI	*The Journal of the Numismatic Society of India*, Calcutta, Bombay and Varanasi.
JRAS	*The Journal of the Royal Asiatic Society of Great Britain and Ireland*, London.
Oxford Classical Dictionary	Cary, M. *et al.*, *The Oxford Classical Dictionary* (reprint), Oxford, 1961.
Pauly	Vissowa, G. (editor), *Paulys Realencyclopādie der Classischen Altertumswissenschaft*, Stuttgart, 1893-.
Periplus	*Periplous Tes Erythras Thalasses* or *Periplus Maris Erythraei* (Frisk, H. (editor), *Le Périple de la Mer Érythrée*, Göteborg, 1927).
PMC	Whitehead, R. B., *Catalogue of Coins in the Panjab Museum, Lahore*, vol. I—*Indo-Greek Coins*, Oxford, 1914.
Schoff, *Periplus*	Schoff, W. H., (translator), *The Periplus of the Erythraean Sea*, New York, 1912.
Schiefner, *Tārānātha* (text)	Schiefner, A. (editor), *Tāranāthae de Doctrinae Buddhicae in India Propagatione Narratio*, Petropoli, 1868.
Sciefner, *Tārānātha* (translation)	Schiefner, A. (translator), *Tāranāthas Geschichte des Buddhismus in Indien*, St. Petersberg, 1869.

Tacitus, *Annals*	Tacitus P. C., *Ab Excessu Divi Augusti* (Loeb Classical Library edition, 3 vols., London and New York, 1931-1937).
Taḥqiq-i-Hind	Al Bīrūnī, *Taḥqiq-i-Hind* (for full title see Select Bibliography, section I, C) (edited by Sachau, E., London, 1887).
Taisho Tripiṭaka	Takakusu, J. and Watanabe, K. (editors), *Taisho Issaikyo*, Tokyo, 1924-1929.



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Shāh-jī-kī-ḍherī Casket Inscription of Kanishka I.	*The British Museum Quarterly*, 1964, vol. XXVIII, pp. 38-46.
Sanchi Inscription of Vaskushāṇa (=Vāsishka Kushāṇa) of the year 22	Marshall, J., Foucher, A., and Majumdar, N. G., *The Monuments of Sāñchi*, vol. I, Calcutta, p. 386; Hamid, H., Kak, R. C., and Chanda, R. P., *Catalogue of the Museum of Archaeology at Sanchi, Bhopal State*, Calcutta, 1922, pp. 29-30; Mukherjee, B. N., *The Kushāṇa Genealogy* (*Studies in Kushāṇa Genealogy and Chronology*, vol. I), Calcutta, 1967, p. 74.
Sanchi Inscription of Vāsashka (Vāsishka) of the year 28	Marshall, J., Foucher, A., and Majumdar, N. G., *op. cit.*, vol. I, 278.

Nasik Inscription of Gautamī Balaśrī, mother of Gautamīputra Sātakarṇi, dated in the regnal year 19 of his son Vāsishṭhīputra Puḷumāvi	*EI*, vol. VIII, p. 59.
Junagadh Inscription of Rudradāman I	*Ibid.*, pp. 40f.
Samoli Inscription of the time of Śilāditya : (Vikrama-Samvat) 703	*Ibid.*, vol. XX, p. 97-99.
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Rapson, E. J. — *A Catalogue of the Indian Coins in the British Museum, Catalogue of the Coins of the Andhra Dynasty, the Western Kṣatrapas, The Traikūṭakas and the "Bodhi" Dynasty*, London, 1908.

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Fan Yeh	*Hou Han-shu* (Ssu-pu pei-yao edition ; for a translation of chapter 118, see Chavannes, E., "Les Pays d' Occident d'Apr`es le *Heou Han chou*", *T'oung Pao*, 1907, s. II, vol. VIII, pp. 149-235).
K'ang T'ai	*Wu shih wai kuo chuan* (quoted in the *T'ai-ping yu-lan*, ch. 359, p. 1650a).
Li Yen-nien (or Li Yen-shou ?)	*Pei-shih* (Ssu-pu pei-yao edition ; information from ch. 97 of the *Pei-shih* was reproduced in ch. 102 of the *Wei-shu*).
Pan Ku (completed by Pan Chao)	*Ch'ien Han-shu* [T'ung-wen shu-chü edition ; for translations of chapters 96A and 96B, see Wylie, A., "Notes on the Western Regions. Translated form the "Tseen Han Shoo", Book 96, pt. I (vol. X) and Part II (Vol. XI), *The Journal of the Anthropological Institute of Great Britain and Ireland*, vol. X, pp. 20-48 and 66-73 ; vol. XI, pp. 83-113).

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SUPPLEMENTARY NOTES
AND
CORRIGENDA

SUPPLEMENTARY NOTES

1. P. 43,

n. 11. Add the following after "pp. 176-177" in line 9 :

A passage in the *Nan-Chou (I-Wu) Chih*, composed around the middle of the 3rd century A.D. and quoted in the above mentioned Cheng-i commentary by Chang Sou-chieh on the *Shih-chi*, ch. 123, p. 3b (or 4b), may be very literally translated as follows :— "The riding horses which in this kingdom (*of the Ta Yüeh-chih*) are (*used for warfare*) number several hundred thousands" (*Italics ours*).

2. P. 43,

n. 12. Add the following after "p. 347" in line no. 13 :

Another example of the interest of the Yüeh-chih in trade may be cited. The Naqsh-i-Rustam inscription of Shāpūr I includes Twgrn—also called Tourene, Twrgstn and T(h?)wrstn—within his empire. We have shown elsewhere that Twgrn included the Jhalawan and Las Bela districts of Baluchistan (in West Pakistan). The name *Twgrn* = *Twgr* + *ān* may denote "the Tochari" or "of the Tochari", since the form *Twγr*, probably pronounced as *Tuγ(a)r*, may be traced to the same source from which we can derive the name *Tokhar(oi)* or *Tochar(i)*

(*BSOAS*, 1937-39, vol. IX, pp. 561-564; *Journal of the American Oriental Society*, 1945, vol. LXV, p. 77 and f.n. 74). The form *Twgr* can indeed be noticed on several coins attributed to the Tochari (*Revue Numismatique* 1910, pl. III, no. 1). Tokharoi or Tochari of the classical sources and the Tukhāras of the Indian sources were identical with or closely related to the Yüeh-chih (B.N. Mukherjee, *The Kushāṇa Genealogy, Studies in Kushāṇa Genealogy and Chronology*, vol. I, pp. 23f). Hence the tracts of Jhalawan and Las Bela might have become known by the name of the Tochari-Yüeh-chih by sometime before the date of the composition of the Naqsh-i-Rustam inscription of c. A.D. 262 (*BSOAS*, 1937-39, vol. IX, p. 845). At least the coastal region of the Las Bela district was placed in the country of the Parodae or the Pāradas by the *Periplus* (*Monthly Bulletin of the Asiatic Society*, January, 1968, vol. III, no. I, p. 5), dated to about the 1st century A.D. (B. N. Mukherjee, *Kanishka I and the Deccan, The Kushāṇas and the Deccan*, pt. I, pp. 122-123). These data may suggest the transfer of the Las Bela area from the Pārada territory to the Twgrn country.

We do not know the motive behind the Yüeh-chih advent in the region. However, it may be noted that according to the author of the *Periplus*, bedellium, a marketable gum (*Periplus*, secs. 39 and

48), was found in large quantity in the coastal area of the country of the Parodae (*Ibid.*, sec. 37). Moreover, nard grew in great abundance in the Gedrosian desert near Ora during the days of Alexander (Arrian, *Anabaseos Alexandrou*, VI, 21-22). The same might have been the case in later times. The *Periplus* refers to Orae = Ora as a part of the Parodae (Pārada) territory (sec. 37) and mentions the export of nard from Barbarikon in Scythia (sec. 39). The great commercial value of nard in the Roman world of the 1st century A.D. is attested to by Pliny (*Naturalis Historia*, XII, 26, 43).

Hence commercial considerations might have been among the forces prompting the Yüeh-chih activities in the existing Parodae (Pārada) territory. However, if the Yüeh-chih dominance in that country implies its inclusion within the Kushāṇa empire, then such an implication was lost before the final dissolution of the latter. For Al-Ṭabarī refers to a king of Turan and also to a Kushan monarch as offering submission to Ardashīr (I).

CORRIGENDA

Page on	*Line on*	*In place of*	*Read*
16	1	texes	taxes
16	3	Inuds	Indus
16	15	Strncture	structure
19	28	*Punjab*	*Panjab*
20	2	*Cambridge*	*The Cambridge*
21	19	*Histery*	*History*
21	21	*Realencyclopadie*	*Realencyclopädie*
21	29	*Age*	*The Age*
23	10	ro	to
23	11	forms	form
24	7	femous	famous
26	13	*'Ain-i-Akbarī*	*'Ain-i-Ākbari*
32	29	*British*	*The British*
32	30	H. W. Baily	H. W. Bailey
33	19	*op. cit.*	*A Sanskrit-English Dictionary* (1951)
34	7	sf	of
34	7	Abūl Fazl-i-Āllamī	Ābul-Fazl-i-Āllami
24	8	Abul	Ābul
35	14	*Gezetteer*	*Gazetteer*
36	13	p. 33	p. 30
37	20	helped	held
37	21	half-price,	half-price"
38	18	referred to	alluded to
38	23	betray	betrays
40	18	as well as	as well as of

Page	*Line*	*In place of*	*Read*
40	23	History	history
43	9	pp. 176-177.)	pp. 176-177).
44	7	**Saragano*	**Saragana*
47	19	sea-coast	seacoast
48	4	sea-coast	seacoast
49	1	Gangam	Gangem
49	13	India	Indian
50	22	the amendment and so any of	amendment and any of
52	19	transaction	transactions
53	4	Ta-haia	Ta-hsia
53	15	luxry	luxury
55	9	perfect	prefect
55	12	Myo	Myos
55	16	countty	country
55	16	tradings	trading
56	18	refering	referring
56	19	Alexender	Alexander
59	5	Raman	Roman
59	8	Unprecendented	unprecedented
61	3	India	Indus
61	19	vol. XXVI	vol. XXXVI
62	10	*Periplus*	*Periplus* (sec. 57)
62	32	came	come
63	15	M. Cary	S. A. Cook
63	16	vol. XI	vol. IX
63	26	M. Cary	S. A. Cook
65	29	*Quaterly*	*Quarterly*
66	3	Schoff, *Periplus*	W. H. Schoff, *op. cit.*

Page	*Line*	*In place of*	*Read*
66	25	*Oxford Classical Dictionary*	S. A. Cook, *et al.*, *op. cit.*, vol. X,
68	7	Korneman	Kornemann
71	9	cmbassies	embassies

N.B. 1. In certain cases *et al.* has been misprinted as *et. al.*

N. B. 2. Please add the following journals to the List of Abbreviations.

BSOAS *Bulletin of the School of Oriental and African Studies*, London.

JA *Journal Asiatique*, Paris.

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